SEX! ALIENS! HARVARD?
RHETORICAL BOUNDARY-WORK IN THE MEDIA
(A CASE STUDY OF ROLE OF JOURNALISTS IN THE SOCIAL CONSTRUCTION OF SCIENTIFIC AUTHORITY)

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Preface

Where I am and how I got here…

"Sex! Aliens! Harvard?" Got your attention, didn't I? Every journalist who writes a news story wants people to read it. Journalists might — and, I would argue, do — have other motives as well, but their most pressing pragmatic objective is to write a story that people will read, to write a story *so* that people will read it. From the *National Enquirer* to *The New York Times*, journalists know that grabby headlines work. Sex always sells – it's a journalistic convention to focus on the sensational. Aliens? More sensationalism, in accordance with the convention of reporting on the unusual. Harvard represents (scientific) authority – it's another journalistic convention to report on official, authoritative sources.

But what *else* might stories about sex, aliens, and Harvard be about?

Given the prominence of science and the ubiquity of mass media in culture, and the influence of media coverage on public understanding of science, it is important to understand the cultural authority of science and journalism's treatment of it. I aim to contribute to this understanding by addressing this question herein: how do journalists participate in the social construction of scientific authority in the mass media?

I have addressed this question in a case study of elite print media coverage of Harvard Medical School psychiatry professor John E. Mack's alien abduction research. I chose this case because it seemed to bring to the surface assertions about scientific authority – involving credentials, credibility, authority, evidence, methods, peer review, publicity, worldview. (I'll return to the "surface" shortly….)

This project is a qualitative, interpretive study. I first conceived it as a predominantly social study of science in the media employing tools of rhetorical analysis to examine texts. I followed guidelines for qualitative, naturalistic research – selectively assembling a sample of texts to consider rather than discard "outliers," for example, and adjusting my analytic framework over time as new findings came to light. As I proceeded with my study I gradually came to (re)conceive it as a rhetorical analysis based upon a substrate (conducted within a framework) of social theory. The language at play in this case was so rich, provocative, and ambiguous that ultimately I chose to employ rhetorical analysis as my primary analytic tool, proceeding on the assumption that rhetoric is a primary means of constructing social reality. I have focused on meanings in this analysis. For the purposes of this study, words are *the* means of making meaning.

My project has benefited from the guidance of a multiperspectival committee of Gurus: a Sociology of Science Guru, a Productive Criticism Guru, a Science Communication Guru, and a Journalism Guru. Each has contributed a different expert perspective. All of these perspectives enhanced and also "complexified" the project for me. As a consequence of these and other influences, my theoretical framework for this analysis is multiperspectival,

drawing on social constructivism, critical theory, cultural studies, dramatistic and productive rhetorical criticism, the concept of framing and the attitude of deconstruction.

I was aware from the very beginning that I was not mapping out a quick and easy route to my final destination (that is, a "done diss"). Nonetheless I chose to proceed without knowing what my final destination would be. I knew the journey would not be easy, but I knew it would be interesting, and I believed that, in the end, it would be productive, in the sense that my Productive Criticism Guru and other like-minded scholars have explored. So I continued down what turned out to be a long and winding road – at some points rather tortuous ("twisted," my Sociology of Science Guru said), and rather poorly marked.

At times I felt lost. I would be certain I was beginning to see clearly what was going on in these texts – I could identify the action taking place, the rhetorical motives of journalists and their sources, the values and interests at play in their stories. Or so I thought. Then I would read and re-read and think some more, reorient my analytical framework, and see something else going on – other actions taking place, other rhetorical motives exhibited, other values and interests at play. Over time, however, letting reason and intuition guide me (in the vernacular, listening to my head and my gut), I finally began to see that I was not looking at an "either-or" but a "both-and" situation. In these stories both pragmatic social action and symbolic ritual action was taking place. What first appeared to be conflicting interpretations turned out to be evidence of complexity.

From the social constructivist perspective I could see journalists and scientists acting out their roles as they perceived them, following professional conventions as they perceived them, toward ends they perceived to be in their own interests. From the Burkean dramatistic perspective I was able to scan the landscape of meaning in this case and uncover and examine ambiguity, complexity, motives, and meanings. Burke's pentad of scene, act, agent, agency, and purpose was a useful matrix for analyzing symbolic action in these texts, a good tool for examining them from different angles. From the critical perspective I could more clearly see journalists' (and scientists') professional and self-interested motives for their symbolic actions. And from the productive-critical perspective I could see the possibility of raising their awareness of those motives, toward evaluating whether they yielded the most useful results. From a cultural studies perspective, I could see a mythic narrative being retold – I could see journalists enacting rituals in their communications about science, maintaining the culture (the cultural authority) of science over time. The metaphor of the frame enabled me to examine and compare text and text, text and metatext. In keeping with the attitude of deconstruction I could pick apart the range of possible meanings of key words employed in these texts.

My Productive Criticism Guru asked me if I could justify my idiosyncratic approach and explain what I gained by sacrificing "efficiency" and stopping short of "closure." Why is a multiperspectival approach better? What might I have missed, he asked, if I had aimed for efficiency instead of delving into ambiguity and complexity? Is it possible to remain open to all possible interpretations and maintain some direction in such an analysis?

As I began this study, following a cue from John Pauly (1991), I thought about the "potentially rich mix of overt and covert meanings" that might be embedded in my sample of texts, hinted at by words that glittered with the promise of gems buried in sand (but, then again, might turn out to be a trick of the eye…). Examining these texts as pragmatic social action, cultural maintenance, and ritual performance allowed me to consider the range of motives, acknowledged or not, that journalists could enact in reporting news. Without the benefit of multiple analytic perspectives, I might have gotten bogged down indefinitely in what I initially perceived to be contradictions in and among my texts. With the benefit of multiple perspectives, I was able to see competing narratives – boundary-tending narratives of transgression, and boundary-testing narratives of heroic acts.

I could have focused solely on pragmatic social action – but then I likely would have missed the ritual enactments performed in some of these texts. I could have conducted a more strictly sociological analysis of boundary-work – but then I would have passed over much of the richness of the rhetoric deployed in this case, where so much ambiguity and complexity lurked. I could have conducted a more conventional framing analysis of journalists' texts – but I might have missed the ritual enactments, much of the richness of rhetoric, and the operation of these texts as a sort of metatext. By foregoing the perspective of productive criticism, I would have foregone the opportunity to consider how my findings might be useful in the everyday action of science communication. By stopping short of closure, I have left plenty of room for other analysts to conduct their own explorations of various aspects of this case and also my findings and conclusions

about it. A "mono-perspectival" approach could have been more efficient, but it would not have been as interesting, illuminating, and productive.

My Science Communication Guru and my Journalism Guru expressed concerns about my findings about my sample of texts as a group (a metatext) when the texts I had chosen to analyze varied so broadly. They appeared in newspapers and magazines, as news reports, features, profiles, reviews, columns. Each story was unique, displaying the marks of particular authors, editors, and sources and conforming to the styles of particular media outlets. However, I found that these stories were linked; they hung together somehow as a narrative. My general statements about these texts are a product of my understanding that these individual texts somehow function as a metatext. By the end of this analysis I found this effect almost overwhelming….

My Sociology of Science Guru helped me to articulate more clearly the role that I found journalists played in the social construction of scientific authority in this case. "Aha!" he said as we were discussing my findings. What is going in this case, he said, is that no matter what journalists were doing in reporting on Mack's research – no matter who they were (science writers, book reviewers, feature reporters…) or what their interests might be (trashing a book, reporting official views, providing entertainment…), no matter what sources they cited (skeptics, supporters, friends, foes…), no matter what outlet they reported for (newspapers, magazines, mainstream, fringe…), no matter what form their stories took (news, features, profiles, reviews…), no matter how they framed those stories (critical, skeptical, serious, humorous…) – journalists were reproducing scientific

authority. They were maintaining the boundaries of science. At some point in our discussion about my findings, my Journalism Guru asked whether it mattered what position journalists took in relation to Mack. With regard to their role in constructing scientific authority in this case, it appears that, no, it did not matter.

I saw pragmatic social action taking place in the stories I examined. But ultimately I came to see that this pragmatic action was superficial – not (turning to dictionary definitions) "shallow" or "trivial" but "on or near the surface"; true to the derivation of the word from "super," on, and "ficies," face; "apparent rather than actual." The same stories that performed pragmatic actions also performed symbolic, ritual actions. Following established conventions and routines, journalists took practical action in these stories, employing frames, headlines, and leads to construct interesting stories and pull in readers. Following cultural cues, journalists took symbolic action in these stories, employing rhetorical strategies that reinforced the boundaries of conventional science and at the same time challenged them, all the while constructing meaning. And some also enacted rituals, telling the story of a scientist's heroic journey, engaging in a performance intended to maintain order, their protagonist a stereotypically heroic scientist. Some or even all of these actions were taking place concurrently in journalists' stories about Mack.

In the end, my Science Communication guru observed that my study "contributes less to our understanding of different journalists' constructions of scientific authority than it does to our understanding of journalists' constructions – across media – of the cultural authority of science. There were superficial differences, to be sure," she said, in how

journalists treated Mack. “But all the stories, at a deep level…reinforced the cultural authority of science because it was in the *interests* of all the actors to do so,” she said. “Even the portrayal of Mack as a hero in some stories did not detract” from journalists’ fulfillment of the task of reinforcing the boundaries of science.

This study affirms the findings of other scholars that the working world of journalists is a world defined by professional practices; that journalists decide what is news out of routine adherence to conventions; that by following conventions journalists maintain order, make myths, manage symbolic reality; that journalists both reinforce and contest authority in reporting on science, and they construct authority for so-called maverick science and scientists simply by reporting on them; that communication can, indeed, function as ritual performance.

In our final deliberations on my project, my Gurus asked me what changes are necessary to make science journalism better. Building on the work of scholars before me as well as my findings in this analysis, I believe that science journalism could benefit from a more multiperspectival approach to reporting science news, that science journalists could improve their reporting by taking a more mindful approach to the news, that rhetorical frames of acceptance (open and inclusive) are more useful in reporting science news than are frames of rejection (closed and exclusive). Frames of acceptance that Kenneth Burke called comic correctives can provide a link between the journalistic right to inform and the responsibility to do so thoughtfully. Such a corrective could be a bridge to the

transcendence of debunking and other strategies of rejection that are all too common in science communication today.

As my Productive Criticism Guru has said, an analyst is taking social action simply by engaging in this sort of criticism, determining that a particular topic is worthy of analysis and examining it from a particular perspective. I have attempted to maintain an awareness of my purpose, intent, and perspective throughout this project. I intend for the results of this act of productive criticism to be useful in heightening journalists' awareness of their own rhetorical strategies and aims, an awareness that might help them to make more informed decisions about the ways in which they communicate about science. For this reason I hope my findings will be useful to teachers of journalism and to scientists as well, toward the same ends. I intend for my findings to foster discussion, and I would not be unhappy if they stirred debate as well (though discussion can take place in a frame of acceptance, while debates tend to occur in frames of rejection). I am already applying my findings in my daily work with scientists and journalists. In my everyday social life, I intend to promote dialogue in science communication.

My dialogue with my gurus enabled them to broaden their frames for considering my analysis, findings, and conclusions, as my Science Communication Guru has observed, to look at my work from different perspectives. My Productive Criticism Guru asked me how I might amend my approach for another study of this sort: I would be more confident about starting out without a rigid framework for analysis, as I have learned that an open frame allows one to see more (and maybe further and better). It has been said that the

exploratory sort of criticism I have engaged in rarely proceeds in a linear fashion. Now that I have completed this work of criticism I can say, emphatically, with regard to that warning: no kidding! This preface constitutes a map you can use to walk through this study, with just enough details to keep you moving forward and plenty of room for side trips if you wish.

And now, here is how I got here….

Linda Billings

SEX! ALIENS! HARVARD!
RHETORICAL BOUNDARY-WORK IN THE MEDIA
(A CASE STUDY OF THE ROLE OF JOURNALISTS IN THE SOCIAL CONSTRUCTION OF SCIENTIFIC AUTHORITY)

With science and the media playing prominent roles in contemporary life, it is important to understand the cultural authority of science and the role of the media in maintaining this authority. This paper will report on a case study of journalists' participation in the social construction of scientific authority. The case involves print media coverage of controversial scientific research conducted by a tenured professor of psychiatry at Harvard Medical School, a Pulitzer Prize winner, and a well-known authority in his field. When this elite scientist embarked upon the study of people who believe they have been abducted by aliens he drew fire for stepping outside the boundaries of "real" science, despite his stellar credentials and long history of accomplishment. Much of this fire took place on the field of the mass media. The boundaries of science and scientific authority were tested in this case, and journalists played a role in the boundary-work. Employing the sensitizing concept of boundary-work to guide analysis of media content, this case study explores how journalists constructed scientific authority in their coverage of Mack's abduction research, and to what ends, and how scientific and journalistic norms operate in media coverage of science. Rhetoric is a primary tool for constructing social

reality, and the rhetoric of science is a key source — for the purposes of this study, arguably the sole source — of the cultural authority of science. Burke's dramatistic criticism is thus employed as a primary analytic tool in this study, to excavate the landscape of symbolic communication. The aim of this study is to illuminate ambiguity, complexity, motives and meanings in this case. It is intended to be thought provoking, instructive, and productive, to enrich the ongoing examination of the cultural roles of science and journalism.

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Chapter 1

Introduction to a case of a deviant doctor:

a rhetorical analysis of journalistic boundary-work

Alien abduction is a familiar theme in popular culture. It is the subject of newspaper reports and magazine features, true confessions and science fiction, television documentaries and big-budget Hollywood movies.[1] Toward the end of the 20th century, alien abduction arrived on the campus of Harvard University. And the authorities were not pleased....

John E. Mack, M.D., was a tenured professor of psychiatry at — as well as a graduate of — Harvard Medical School. He spent his entire career at Harvard, making a name for himself through achievements such as the conversion of a declining urban hospital into a thriving medical teaching center, the creation of Harvard's well known Center for Psychology and Social Change, the winning of a Pulitzer prize for a psychobiography of T.E. Lawrence, and the continuing education of the public about the psychological effects of war and other traumas. In the early 1990s, Mack embarked upon a new research project: the study of people who believe they have been abducted by aliens — extraterrestrial intelligent beings. Despite his stellar credentials and long history of accomplishment, he drew fire from colleagues for stepping outside the boundaries of real science. Much of this fire took place on the field of the mass media.

Inside and outside Harvard's home town of Cambridge, Massachusetts, members of the scientific establishment expressed displeasure with their colleague for devoting his time to people who believed they had been kidnapped by extraterrestrials. In the face of rising criticism and a formal investigation of his research methods, this particular scientist, instead of backing away from his new study subject, publicly and repeatedly asserted that the conventional, positivistic scientific worldview[2] might be too limited in scope to explain the phenomenon he was investigating. Journalists writing about Mack's new research interest probed for personal and professional flaws, critiqued his research methods and questioned his conception of reality.

A tenured professor affiliated with an elite institution at the top of the heap of the scientific establishment, who used hypnosis and other controversial techniques to work with alleged alien abductees, who published a best-selling book on his research before publishing his findings in peer-reviewed journals, who appeared on popular television talk shows and openly discussed the politics of science — this appeared to be a case of transgression. This was the stuff of news.

But what exactly *was* the news?

Given "the centrality of science to modern life" (Leshner, 2003), the ubiquity of journalism and mass media in contemporary culture, and the influence of media coverage of science on public knowledge and attitudes about science (Pellechia, 1997), it is

important to understand the cultural authority[3] of science (that is, scientific authority) and journalism's treatment of this authority — what this authority is, where it comes from, how it is used and to what ends. This study examines how journalists covered controversial research conducted by an elite scientist in a case that appeared to involve the definition, contestation, and reinforcement of scientific authority.

The key question addressed in this study is, how do journalists participate in the social construction[4] of scientific authority in the mass media? This study focuses on how a select group of journalists reporting for elite mass media participated in the social construction of scientific authority in their coverage of John Mack's abduction research.[5]

Science in culture

Like science, culture has been widely and variously defined.[6] For the purposes of this study, Geertz's (1973) definition applies: culture is "an historically transmitted pattern of meanings embedded in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about and attitudes toward life" (p. 34). Thus conceived, culture is a context, within which social action can be "intelligibly — that is, thickly — described" (p. 14). As Carey (1983) noted, "Societies...are threaded throughout...by culture: by the production and reproduction of systems of symbols and messages" (p. 313). Building on Geertz's conception, Carey (1992) described culture "as a set of practices, a mode of human activity, a process whereby reality is created, maintained and transformed" (p. 65) and

posited that Geertz's theory of culture "progressively becomes a theory of communication as well" (p. 40).

That is, "what is called the study of culture can also be called the study of communications," as Carey (1992, p. 44) observed. The conception of communication explored in this case study is Carey's conception of communication as ritual enacted to maintain culture over time, a symbolic process of creating, maintaining, and transforming reality. "Communication," Carey said, "comprises the ambience of human existence" (p. 24), the way that we construct and experience reality. Science and journalism are among the many symbol systems constructed communicatively to "express and convey our knowledge of and attitudes toward reality" (p. 30). Carey's concept of communication as ritual locates this symbolic action in culture and also characterizes it as constituting culture.

Culture is the context in which power arises and operates, and the mass media are an integral element of culture and a site where power arises and operates. In Carey's (1992) view, it would be useful for communication studies to explore how various symbol systems are constructed and used and how "groups in society struggle over the definition of what is real" (p. 31) through the construction and deployment of these symbolic forms. The question driving this study encompasses both of these questions. Zelizer (1997a) noted that mass communication research has not addressed the ritual functions of journalism, as narrative or performance; this study attempts to do so.

The public representation of science is "part of scientific work, conducted by professional scientists and other spokespeople who are actors in science social worlds [sic] or networks," according to Zehr (1994a, p. 604), and public representations of science are a worthy subject of study "because of the authoritative position of science in society." One place where science is symbolically represented and constructed is the mass media. This study explores the role of journalists in constructing scientific authority through their public representations of science and scientists in the media. Its aim is to contribute toward enhancing understanding of science in, and as, culture. It examines the symbolic action[7] by which journalists participate in the social construction of scientific authority, the deployment of journalistic conventions, practices and values in the course of this action, and the broader cultural context in which they operate.

I believe it is important to articulate some of the assumptions under which I have proceeded with this study, as follows:

• Science — including scientists, the process and practice of science, scientific knowledge, scientific institutions, scientific authority — is a social construction created by scientists and others through the symbolic action[7] of communication;

• Science has cultural authority, a quality created by scientists and others in the process of the social construction of science, a quality that scientists claim and nonscientists grant them to act as arbiters of reality;

• Journalists play a role in the construction of this authority; and

• Rhetoric is a primary tool in this construction.

Setting the stage: the 1990s

Given his public prominence, professional credentials, and institutional affiliation, perhaps John Mack would inevitably attract attention by announcing a new research project. Mack drew considerable attention when he went public about his professional interest in what he came to call the alien abduction phenomenon — his work with emotionally traumatized people who believed they had been abducted by extraterrestrial intelligent beings. But why exactly was Mack's research news?

The aim of the practice of psychiatry, Foucault (1965) asserted, is not to understand mental states but to control and discipline them. The practice of psychiatry especially exemplifies the mutual dependence of knowledge and power, he wrote (Foucault, 1977). At the same time, according to Scull (1989), psychiatry historically "has enjoyed a perpetually marginal and unenviable position in the social division of labor — a profession always, so it seems, but a step away from a profound crisis of legitimacy" (p. 21). Psychiatry is thus a newsworthy subject, with its focus on mental and behavioral norms and deviance and its purported agenda of social control.

In addition, media coverage of Mack's abduction research unfolded in the 1990s, a decade permeated with the residue of the previous decade's public skirmishes in the so-called culture wars.[8] In addition, the '90s encompassed many events marked as skirmishes in the so-called science wars[9], events at least in part a response to the cultural critique of science that arose in the 1970s, questioning the philosophical foundations of science (Harding, 1991), the role of science in society (Ben-David, 1991), and the

legitimacy of "scientific rationality itself" (Ross, 1991, p. 12). LaFollette (1990) has explained this critique as a reaction "to decades of mismatch between positive messages and negative effects, between an idealized expectation of benefit and the reality of unpredicted harm, between the scientists' endless promises and the public's unfulfilled desires" (p. 17).

By the beginning of the '90s one observer (Ross, 1991) claimed: "It is safe to say that many of the founding certitudes of modern science have been demolished" (p. 12). Some scientists cultivated the defensive attitude that the public was not only losing interest in science but also growing hostile toward it, and they pointed to postmodernism and cultural studies as possible culprits, accusing relativists, deconstructionists, and other non-believers of undermining public faith in science. Gross and Levitt's (1994) *Higher Superstition* — published in the same year as Mack's book *Abduction* — drew a lot of attention in circles where the cultural critique of science was of interest.[10] The so-called Sokal hoax of 1996 — publication of physicist Alan Sokal's *faux* postmodern analysis of quantum gravity in the cultural studies journal *Social Text*, and all the brouhaha that ensued — generated extensive coverage in elite media.[11]

The '90s were also colored by ongoing public debate about the validity of Freudian concepts and psychoanalysis and related disagreements over claims of repressed and recovered memories (see Beaubien, 1994; Borch-Jacobsen, 1997; Carman, 1995; Crews, 1995; Gardner, 1994; Goleman, 1992; Kaminer, 1996; Loftus, 1993; Loftus & Ketcham, 1994; Ofshe & Watters, 1994; Showalter, 1997; Zitner, 1992). The so-called memory

wars focused on controversy over the scientific reality of the psychoanalytic concept of repressed and recovered memory, a contested idea virtually ever since Freud first put it forward. Freudian literary critic turned Freud-basher Frederick Crews lit a fire under the topic in 1993 when he published the first of a series of articles about the so-called memory wars, the term he used to describe the ongoing dispute over the validity of repressed and recovered memories, a struggle he deemed part of a wider argument over the validity of all Freudian theories and methods, none of which, Crews insisted, had received any scientific validation (Crews et al, 1995). Crews, an emeritus professor of English at the University of California-Berkeley, rejected Freud's theories and methods, blamed Freud for the current belief in repressed and recovered memory, and pronounced such memories false.

The debate over memory was further fueled through the '90s by the publication of several popular and provocatively titled books about the subject, including psychologist and memory expert Elizabeth Loftus's *The Myth of Repressed Memory: False Memories and Allegations of Sexual Abuse* (Loftus & Ketcham, 1994); Lawrence Wright's (1994) *Remembering Satan*, an investigation of allegations of satanic ritual abuse that was excerpted in *The New Yorker*; and psychologist and recovered-memory debunker Richard Ofshe's *Making Monsters: False Memories, Psychotherapy, and Sexual Hysteria* (Ofshe & Watters, 1994). These authors claimed evidence did not show that memories could be repressed and recovered and further argued that making a case for the reality of repressed and recovered memories could be dangerous.

Ofshe[12], a professor at the University of California-Berkeley, an expert in his own right, and one of the most sharp-tongued public critics of the idea of repressed and recovered memory, wrote in *Making Monsters* that he intended "to prove without a doubt that devastating mistakes are being made...within certain therapy settings" and to expose "a pseudoscientific enterprise that is damaging the lives of people in need" (Ofshe & Watters, 1996, p. ix). He called therapy for it a fad "as damaging as any the mental health field has produced in this century," practiced by "professionals who have built a pseudoscience out of an unfounded consensus...[and] slipped the ties that bind their professions to scientific method and sound research...." He accused recovered-memory therapists of "brutalization and psychological torture" and claimed a subset constitute "a new class of sexual predator...causing the same emotional and psychological trauma as an actual rape or sexual assault" (p. 7). Ofshe dismissed Freud himself as "the very figure of a recovered memory therapist" and the creator of a "pseudoscientific paradigm" and "prescientific" theories "based on no reliable empirical evidence" (pp. 293-294). He opened his book claiming that a "bitter debate" was raging "over...recovered memory therapy," and he closed it with the claim that "a civil war" was under way between "romantics who rely on inspiration and myth and empiricists who argue that practice...should be based on scientific observations" (p. 298), declaring empiricists were winning the war because romantics made claims they could not prove. Some journalists would turn to Ofshe for comment on Mack's *Abduction* (Mack, 1994a), and Ofshe would deliver, with harsh words for Mack and his validation of the idea (see Chapter 5). (In *Making Monsters*, Ofshe listed media sources he claimed had contributed to the construction of the idea of repressed traumatic memories.)

The False Memory Syndrome Foundation, created in 1992 in response to media reporting on repressed and recovered memory, coined the term "false memory syndrome" as a substitute for repressed and recovered memory and ultimately succeeded in replacing the latter with the former term, consequently redefining the idea of repressed and recovered memory as false, largely through media exposure (Pope, 1996).[13] The foundation's advisory board of psychologists, psychiatrists, sociologists, and cognitive scientists helped disseminate the false memory syndrome thesis in scientific journals and expert testimony as well as the mass media. Thus the foundation's claims that all memories are reconstructions and that no scientific evidence supports the so-called repression theory surfaced often in media accounts. Meanwhile, the American Psychiatric Association (APA), producer of the *Diagnostic and Statistical Manual of Mental Disorders*, linked the experience of childhood sexual abuse, often coupled in the media with the idea of repressed and recovered memories, with dissociative identity disorder, "a failure to integrate various aspects of identity, memory, and consciousness" (American Psychiatric Association, 1994, p. 484). APA also noted that the accuracy of reports of such abuse was questionable. In 1995, the American Psychological Association "approved [the False Memory Syndrome Foundation] as a provider of continuing education programs for psychologists" (False Memory Syndrome Foundation Newsletter, November-December, 1995, e-mail edition, as cited by Pope, 1996, p. 957).

News stories through the '90s offered a range of views about repressed and recovered memories and false memory syndrome. In 1992 *The New York Times* reported that claims

of recovered memories of childhood abuse had "set off a debate" among psychologists of memory (Goleman, 1992). The *Times* cited two psychologists who claimed repressed memories were a real problem and four psychologists — all affiliates of the False Memory Syndrome Foundation — who dismissed such memories as the creations of therapists. Reporting on "a problem that Freud himself struggled with: whether to trust adult memories of childhood," the *Boston Globe* (Zitner, 1992, p. 25) quoted the False Memory Syndrome Foundation and a woman claiming to have recovered memories of childhood satanic ritual abuse. Psychiatrist Walter Reich (1994) claimed in *The New York Times Book Review* that the subject of recovered memory had captured popular interest because of increasing attention to childhood sexual abuse, prompted in part by criticism of Freud's theories about such abuse. Reich asserted that reports of recovered memories of childhood sexual abuse had drawn a great deal of attention in the mass media and that experts, not journalists, should have the authority to determine what counts as legitimate memory.

"Recovered memory is a fact, says Chicago psychiatrist, though others call it fiction," claimed a 1994 headline in the *Chicago Tribune* (Beaubien, 1994, p. C1). Citing "bitter national debate over the validity of recovered memory therapy" (p. C1), this story claimed the practice was "destroying families and dividing the psychiatric profession." The story quoted Ofshe dismissing "the recovered-memory epidemic" as "quackery" (p. C1). Meanwhile, the *Des Moines Register* claimed the media had gone "overboard" in the 1990s with coverage of false memory claims (A profession under siege, 1994, p. 1). *U.S. News and World Report* (Schrof, 1997) called the debate over repressed and recovered

memory "a furor that has ripped apart many families" (p. 67). In reporting a state decision to stop paying therapy costs for people who claimed to suffer from repressed and recovered memories, a story in the *Sacramento Bee* (Hallinan, 1997) began, "First, there was the woman with 3,000 personalities, Then there was the one who said she was forced to eat a baby's heart" (p. F1). The *Bee* went on to claim the decision was "part of a national backlash against recovered memory" (p. F1).

As the discourse of the '90s on memory continued to unfold, fretting continued in the science community over scientific literacy and public understanding of science, or the lack thereof (see Hartz & Chappell, 1997; Hofstadter, 1998; Lederman, 1998; Sagan, 1995). Scientists concerned about public science literacy, or the lack thereof, were quick to remind journalists of their responsibility to help scientists educate the public.[14] In parallel with these currents in the public discourse about science, reports of unidentified flying object (UFO) sightings, alien abductions, and government-coverup conspiracies continued to proliferate in the mass media along with fictional treatments of these subjects.[15]

Claiming the influence of pseudoscience was growing, the American Physical Society proposed in 1998 that the science community should adopt a formal definition of science and sought the approval of other scientific societies for the following:

> Science is the systematic enterprise of gathering knowledge about the world and organizing and condensing that knowledge into testable laws and theories. The success and credibility of science is anchored in the willingness of scientists to: 1) Expose their ideas and results to independent testing and replication by other scientists. This requires the complete and open exchange of data, procedures and materials. 2) Abandon or modify accepted conclusions when confronted with

> more complete or reliable experimental evidence. Adherence to these principles provides a mechanism for self-correction that is the foundation of the credibility of science" (American Physical Society, 1998).[16]

At about the same time, the prestigious journal *Nature* reported on "Calls for a cease-fire in the science wars" (Henry, 1998, p. 557). By the turn of the century Harvard scientist Stephen Jay Gould (2000) was deconstructing the wars in *Science.* "The objectivist myth of science as a fully general method," he wrote, "rooted in observation by minds consciously free of constraining social bias and using universal tools of reason to accumulate reliable knowledge leading toward an increasingly synthesized theoretical understanding of causes" (Section II, para. 1) creates a "false dichotomy" (Section II, para. 1) between science, or realism, and social constructivism, or relativism, "that defines and fuels the illusory science wars" (Section III, para. 1). He concluded:

> The true, insightful, and fundamental statement that science, as a quintessentially human activity, must reflect a surrounding social context does not imply either that no accessible external reality exists, or that science, as a socially embedded and constructed institution, cannot achieve more adequate understanding of nature's facts and mechanisms (Section IV, para. 7).

It is not clear what the science wars, or the memory wars, were, if anything, or what they were about (though they appeared to involve disputes over claims to authority), or whether they amounted to anything more than a jumble of public (or publicized) events involving (or manufacturing) controversies somehow relating to science and plastered with a catchy label. In any case, whatever did or did not happen, postmodernism and cultural studies were not erased from the intellectual landscape, and science was not vanquished.[17] This analysis proceeds on the assumption that what journalists and scientists called the science wars were simply, as Gieryn (1999) observed, particularly

public episodes in the ongoing discourse on the origin, nature and functions of science in culture, especially scientific authority and the ways in which that authority is sustained.[18] This study considers a particular case in a particular cultural moment, a case in which science was in dispute, memory was a cause for battle, and aliens were everywhere.

Parameters of the case

Media coverage of Mack's abduction research initially drew my attention because it appeared to be atypical science news. Stories were published in elite media, typical sites for science news. They addressed controversial research, a typical focus of science news. But they featured sensational headlines and leads, foregrounding a Harvard professor, extraterrestrials, and alien sex. A story in the sedate, white-collar *Boston Globe* (Kahn, 1994) was one of the first that stood out with its tabloid-style headline, "ET, phone Harvard: Dr. John Mack could use the help as critics rip his research on alien abductions," and lead, "The big Mack attack has just begun. And no one has heard from the little people yet" (p. 61). On closer examination I found these stories not only provocative but also thought-provoking. It appeared that something interesting might be going on beneath their superficial framing, emphasizing Harvard, aliens, and sex. Stories clearly and consistently identified Mack as an elite scientist and often focused virtually exclusively on his status. But the journalists who wrote these stories appeared to be questioning Mack's authority to speak as a scientist at the same time that they were constructing him as a scientific authority and using him as an authoritative source. The case of media coverage of Mack's abduction research appeared to be sufficiently rich to warrant a full-blown analysis.[19]

The Mack case is interesting because it involves pace-setting elite media, a prominent scientist and a member of the scientific elite, and what appears to be a controversy over authority and legitimacy. In this case, Mack, his supporters and his critics argued over whether his latest endeavor was legitimate or illegitimate science.[20] Journalists and scientists appeared to be questioning not only Mack's claims and methods but also the legitimacy of his work as science and his own credibility as a scientist. A systematic exploration of this case yields new and useful insights into how journalists participate in the construction of scientific authority. This study is intended to be thought provoking, instructive, and productive[21], to enrich the ongoing critique of the cultural roles and functions of science and journalism.

Study approach, goals and purpose

This project is a qualitative, interpretive study. Its theoretical foundation is social constructivism (Berger & Luckmann, 1966), with guidance provided by the sensitizing concept (see below) of boundary-work (Gieryn, 1983, 1995, 1999), which aims to explain "when, how and to what ends the boundaries of science are drawn and defended in natural settings often distant from laboratories and professional journals" (Gieryn, 1995, p. 394).[22] (For the purposes of this study, boundary-work is any rhetorical strategy or tactic employed to reinforce, test, blur, erase, or reconstruct the rhetorically constructed boundaries maintained by the scientific community to demarcate science legitimated by consensus from claims made by individuals, inside or outside of that scientific community, that do not fit within that consensus worldview.)

In the constructivist view, the practice and process and worldview of science, and the cultural authority of science, are social constructions contingent on their time and place. Constructivist studies depend on observations of the world of everyday life, and so the method of case study fits this research project. The case-study method is well suited to accommodating "multiple realities" (Lincoln & Guba, 1985, p. 214), including those of the researcher and the research subject(s), in a complex cultural context. Given its focus on cultural authority, this study draws on the literature and employs some of the approaches of cultural studies, with its critical, post-positivistic focus on the role of the mass media in social life and power relations in communications and society (Carey, 1983). Because rhetoric is a primary means of constructing social reality, rhetorical analysis is employed as a primary analytic tool in this study. The rhetoric of and about science is a means of maintaining, defending, remodeling and demolishing the boundaries of science, between science and non-science, between scientific disciplines, between science and the public. This case study builds upon findings in studies of the rhetoric of science to examine the deployment of rhetoric in a particular case of elite media coverage of an elite scientist engaged in controversial research. Burke's (1969a, 1969b, 1973, 1984) dramatistic criticism is the analytic method of choice for exploring in depth the rhetorical strategies deployed in texts selected for analysis.

This study explores how journalists define and use key terms such as science and objectivity in the texts selected for analysis, employing loose definitions of these terms that may function as sensitizing concepts (Christians & Carey, 1989, pp. 369-370). Such

loose definitions allow the researcher to consider a potential multitude of meanings and uses of terms; they are intended to be meaningful to the researcher "yet sufficiently powerful to explain large domains of social experience" (p. 369-370). A range of definitions for the term "science" is reviewed in Chapter 2. This study employs a broadly and loosely defined conception of science, operating on the assumption that what science means depends on who is employing the term, and when, and where, and toward what ends. Science herein is generally considered a cultural phenomenon, involving scientists, scientific practices, scientific values, scientific institutions, scientific authority, and scientific communication. As "objectivity" is very much tied up with conceptions of science, a range of definitions for this term are reviewed in Chapter 2 as well.

Wilcox (2003) has asserted that analysis of media coverage of science requires consideration of "the full circuit of communication, including discourse about [science] originating from social locations other than science, the full set of studies produced by science, and the requirement of the media for dramatic stories" (p. 241). According to Fursich and Lester (1996), while science communication research has sometimes taken a critical approach, researchers generally have not pursued analyses "based in a thorough concept of science and culture" (p. 24). This project attempts to do so, following the lead of studies that "focus on the diverse encounters with science and expertise that typify everyday experience," as Wynne (1991) has characterized them, "a central analytical issue being the construction of authority" (p. 111). By documenting and analyzing a particular case in considerable depth and breadth, this study aims to enhance understanding of how journalists contribute to the social construction of scientific

authority and the boundaries of science through the symbolic action of communication and, perhaps, broaden understanding of science, communication, and culture. Given the theoretical foundation and methodological approach of this study, the aim here is to explore and reveal rather than explain and resolve complexity, ambiguity, and uncertainty in this case. I have conducted this analysis with an awareness of what Ivie (1995) has described as "simultaneously representing and enacting reality-defining discourse" (n.p.) while doing the work.

If, as Wilcox (2003) has claimed, "media coverage is part of a circuit of communication between other institutions and knowledge communities," then examining media content within a broad cultural context is a means toward revealing "the active role of the media in constructing narratives and meanings" (p. 244) through reporting on science. This research project is intended to contribute to the scholarly discourse on science communication, the practice of journalism, and the cultural roles of journalism and of science. It aims to shed light on the processes by which scientific information and scientific legitimacy are conveyed throughout the public domain, a subject that has been declared a worthy goal of science communication research (Dunwoody, 1992)**.** As this study may broaden understanding of the role of the media in the social construction of scientific reality, it may also broaden understanding of the role of the media in society, a subject of continuing debate.

Rationale for case and approach

Consideration of how journalists portray science and scientists in the media warrants some consideration of the image of science and scientists in society and culture. The common wisdom regarding the cultural role of science and scientists in contemporary culture might be summarized as follows: science is a rational enterprise dedicated to producing knowledge for the public good, public understanding of science is necessary to maintaining a free and open society, scientists understand science and non-scientists do not, and scientists are responsible for informing the public about science. The common wisdom further posits that journalists are responsible for conveying this information about science from scientists — the authoritative sources — to the ignorant public and that good science journalism is a matter of getting the facts right.[23] But what happens in a case where journalists intent on getting their science right are reporting on an elite scientist whose peers say he is wrong?

This case study documents a dispute over knowledge claims, examining elite-media coverage of the controversial research and controversial claims of an elite scientist who questioned the dominant scientific paradigm. Disputes over scientific knowledge claims warrant more systematic study, according to Brante (1993). This study approaches the discourse on Mack's abduction research as a scientific controversy (Brante, 1993; Hagendijk & Meeus, 1993; Martin & Richards, 1995; McMullin, 1987; Mendelsohn, 1987), a public conflict over scientific knowledge claims that some members of the scientific community appeared to take seriously.[24] Such conflicts have been described as cognitive and social disputes over what constitutes legitimate scientific knowledge (Gieryn, 1999) and "valuable sites for carrying out research into the nature of scientific

knowledge claims" (Martin & Richards, 1995, p. 510) and scientific worldviews. "Unresolved controversies" have been deemed "particularly rewarding sites" (p. 513) for study. Conflicts over scientific knowledge claims tend "to reveal some of the assumptions upon which science is built," according to Brante (1993), and thus studying them is "a useful method for determining hidden norms and values in scientific communities" (pp. 186-187). Examining conflicts over who has "the right to speak" about science, "who has the true (scientific) knowledge on his or her side" (p. 189) is a useful way to attempt to understand struggles over scientific authority. A contextual, multiperspectival approach to analyzing a controversy over scientific knowledge claims promises to provide a useful view of the symbolic action taking place in the dispute (Martin & Flores, 1998).

Rhetorical analysis of science news has been identified as "a potentially rich area of study" that could broaden understanding of "the structure and significance of texts" and "has not received the attention it deserves" (Evans & Hornig-Priest, 1995, p. 328). Digging into the discourse of science[25], through which scientific knowledge is constructed (Woolgar, 1988), is a useful way of exploring the social construction of the boundaries that separate legitimate from illegitimate science. Media coverage of science is an especially interesting and public element of this discourse. The media content chosen for examination in this study appears typical in its representation of science, focusing on elite scientific credentials, scientific methods, and controversy. It is atypical, however, in its focus on an elite scientist who engaged in what some argued was illegitimate science. "The empirical naming and knowing of the physical world is nothing

if not a cultural expressive act with fully political meanings," according to Ross (1991, p. 13). Consequently, examination of the rhetoric employed to define and defend science and scientific reality in this case is a useful method of exploring the social construction process.

This study examines the symbolic action of communication in a particular case. It is not a content analysis but a meaning-of-content analysis. It is not concerned with the accuracy or adequacy of explanation in science journalism, nor does it examine readers' roles in the social construction of reality in this case. It focuses on the texts, the producers of the texts, and the cultural context in which they produced them.

Analyst's perspective

Because this is an interpretive analysis, I am attempting here to identify the values, beliefs, and other personal factors I am aware of bringing to the project as they may influence my process and outcome. I believe that the individual perspective and idiosyncratic approach guiding this study inevitably have yielded research results that no one else could replicate.

My choice of case, construction of theoretical framework, and selection of analytic methods and tools are products of my upbringing, education, experience and interest in the worlds of journalism, science, and politics. Just as a journalist makes subjective decisions every time she chooses to do a particular story (or not) or consult a particular source (or not), a qualitative researcher makes subjective decisions in choosing a subject

of study and a method by which to study it. My interest in and perspective on the cultural roles of science and scientists and journalism and journalists, which led me to choose a particular subject and methodological stance for this study, are a product of a lifetime of influences.

I began learning about the natural world empirically, through observation and experience, guided by members of my extended family of Eastern-European-immigrant farm workers, who validated the importance of wondering and learning about one's environment. These teachers were functionally illiterate; they learned about the world not by reading and theorizing about it but by being in, doing in, and practically thinking in and about it, and they passed on this way of knowing, which is both rational and intuitive. Public educators supplied me with literate, primarily rational knowledge about the natural world. I am consequently equipped to employ reason and experience in learning how to be and do and think in the world.

I developed what I think of as a political consciousness in the late 1960s and came to assume (and, after frequent reconsideration, still do assume) that authority can be, and often should be, questioned. A new wave of feminism played a prominent role in the development of my thinking about the world. I received my undergraduate education at a university of the liberal arts that encouraged its students to question everything, especially authority and reality. Among faculty and students, politics were not hidden from view. I majored in social sciences and planned to be a social worker. But with jobs in the field scarce when I graduated, instead I ended up in Washington, DC, and in 1978 I

began a career as a journalist, reporting environmental news. I was dispatched to the White House, Congress, federal agencies, and elsewhere to decipher debates over toxic waste cleanup, industrial air and water pollution, land use decisions and so on. Editors and other colleagues worked with me to ensure that I learned and abided by the conventions, values and practices of journalism — though no one, as I recollect, ever identified them as such.

Over the next several years I came to specialize in reporting science and technology news. My work as a journalist sharpened my political consciousness, and after my first few years of reporting I began to realize that I had political interests that affected how I saw the world of news. I began to realize that I could choose what to tell my readers to think about — *and* what to think about those things. I had power of a sort, I suppose, though I preferred to think of it as influence. From my perch inside the Washington Beltway, I watched scientists acting as cultural authorities and gradually realized over the course of these observations that I had not been, and should be, questioning why they had that authority, or whether they should have it.

They were scientists; therefore they were authorities, I had been assuming. I watched others validating that authority, for some time unaware that I myself was participating in the process. I watched other journalists judging scientists' authority according to their institutional affiliations, ranks, prizes, publications — and I followed suit, without much awareness of what I was doing and why I was doing it. I suspect that many of my colleagues were in the same boat; we did not talk about where and how and why we

learned the rules by which we did our work. But perhaps we should have been asking more questions about our authoritative sources — why those particular people at that particular time in that particular place on those particular issues?

By 1984, reporting on policies and plans for the commercial development of outer space, I could see that the issue I was covering was an ideological rather than a practical matter, a product of the Reagan administration's "let the private sector do it" philosophy rather than any real potential for profit. My publishers declined my request to start an opinion column in my publication, for fear of offending readers. I realized I had other options for reflecting my views in my work — for example, paying closer attention to what was said and not said in my stories, who was quoted and who was not. I left journalism in 1988, in part due to struggles with a publisher over what constituted news and who should have the authority to make those decisions. I began consulting work for government clients, observing from a different vantage point how credibility, authority, and power are constructed and deployed.

Over years of following the politics of science, I observed how government, industry, and academia defined science to serve their interests. As I watched scientists, and others, spar over global warming, missile defense, asteroid threats, and other issues defined as scientific problems through the 1980s and '90s, I began to wonder — and I still do wonder, often — how does one decide who is telling the truth? And what is the truth, anyway? These questions, among others, led me to pursue doctoral studies in communication. Looking back, I suppose it is reasonable to say that I left journalism

because I had become more interested in "how" and "why" than in the "who-what-when-where" of social action. As many scientists have discovered in their work, I have found in my research that the more I explore these questions, the further away I seem to be from answers…. But I am more interested than ever in the exploration of space.

I do not believe that science is apolitical or value-free, and I do not assume that the cultural authority of science is beyond question. I also do not assume that the scientific establishment is *not* justified in its claims to cultural authority. I do assume that those who possess it, or want to possess it, should be able to justify possession. My interest in the cultural authority of scientists and journalists stems from working with scientists and journalists. I want to better understand this cultural authority — where it comes from, how it works, who has it and why. And given that scientists claim this authority and non-scientists continue to validate this claim, I believe that contributing to a better understanding of this authority is a productive social endeavor.

As a moderate social constructivist, I assume that a physical reality exists independent of human perception and that social interactions define how we perceive and relate to this reality. My inclination to look at the world from a critical perspective is a product of my interest in authority. My interest in exploration as an analytic approach is a product of my early experience in a family of self-taught naturalists as well as my two decades of professional experience in the field of space exploration. I have an interest in things extraterrestrial which is largely a product of my work with NASA's search for extraterrestrial intelligence program in the early 1990s. [26]

I also admit to a lifelong interest in, and ambivalent feelings about, psychology and psychiatry. Through the 1970s, I studied the works of Carl Jung and developed a distaste for all things Freudian. By the 1990s I ended up in the care of a psychiatrist for clinical depression and resented it a lot. The neuroscientific perspective was (and still is) dominant in psychiatry, and doctors treated my depression as a chemical imbalance. I believed that my problem was more complex, not only neurobiological but also, somehow, spiritual. I am still in treatment for depression, the chemical-balance treatment is working, and I still feel the same way about my illness. I have developed a considerable interest in psychiatry and in Freud. And I have joined a Unitarian Universalist congregation to tend to my spiritual needs.

With regard to structuralist, functionalist, structural-functionalist, postmodernist, poststructuralist, feminist, and deconstructionist perspectives on social reality, my own perspective on social reality is none of the above in any strict sense and all of the above in at least some small sense. I am interested in how structure, function, values, interests, and any other social or cultural factors that appear to be operative and relevant may play a role in the social construction of reality, in this case and in general. Though I am now inarguably a member of the socioeconomic middle class, I continue to think of myself as a member of the subordinate culture of the working class in which I grew up as well as the subordinate culture of womanhood in which I still live. (My male colleagues and associates argue with me that women are no longer members of a subordinate culture, but I beg to differ.) I am familiar with the practices and perspectives of the dominant culture

as well as those of my subordinate cultures, and consequently I have developed a preference for considering multiple perspectives in exploring empirical and social reality. As feminist theorists of science have observed, and I have come to believe, drawing on multiple perspectives in attempting to understand the world is useful (Haraway, 1991; Harding, 1991, 1987). And I agree with Walters (1997) that understanding the origin, nature and deployment of scientific authority is necessary to determining "the place of science in shaping a democratic society" (p. 2).

Notes

1. Some of the better known alien abduction vehicles include Stephen Spielberg's 1977 film "Close Encounters of the Third Kind"; Whitley Streiber's best-selling book *Communion* (1987) and its sequels; numerous episodes of Fox TV's "X-Files" series of the 1990s; frequent documentaries on the Discovery Channel, the History Channel, and other cable outlets; and, most recently, the Sci-Fi Channel's much-hyped 2002 mini-series "Taken."
2. For the purposes of this study, worldview is a set of attitudes, beliefs, and values employed to explain and understand one's environment, a way of perceiving and interpreting the world, "a collectively agreed-upon and thus collectively valuable way of organizing social reality" (Rosenberg, 1996, p. 10.). For the purposes of this study, the positivistic worldview is a way of looking at the world in which legitimate, objective scientific knowledge is that acquired by observation, experiment, and verification; the world of scientific reality is the world that can be observed. Comte's "positive philosophy" lent a name to this worldview and conveyed the idea that scientific method depends on reason and observation.
3. This analysis uses the term "cultural authority" as defined in Gieryn (1999): "the probability that particular definitions of reality…will prevail as valid and true" (Starr, 1982, as quoted in Gieryn, 1999, p. 1). Gieryn says by this definition cultural authority resembles what he calls epistemic authority, "the legitimate power to define, describe, and explain bounded domains of reality" (p. 1). Between these two definitions, the cultural authority whose construction is

examined in this analysis is well described. The cultural authority of science is also referred to herein as scientific authority.

4. In this proposal, the terms "social construction" and "construction" encompass a range of activities, including building, maintenance, remodeling, renovation, and demolition.
5. For simplicity's sake I use Mack's term "abduction phenomenon," or "abduction" for short, throughout this analysis to refer to the claims that people have made that they have been abducted by extraterrestrial intelligent beings and the subject of Mack's research. This choice of terms is not intended to convey any judgment about the reality or non-reality, truth or non-truth, validity or non-validity, of these claims or Mack's research project.
6. Fukuyama (1995) cites a single survey of research on anthropology, psychology and sociology that includes 160 definitions of culture.
7. Blumer (1969) called the interaction by which people construct social reality "symbolic interaction." Burke (1973) called this social interaction "symbolic action." Since I will be employing rhetorical analysis as a primary tool in this study, I will use the term "symbolic action" to describe the interaction by which people construct social reality.
8. See, for example: Bloom, A. D. (1987). *The closing of the American mind: how higher education has failed democracy and impoverished the souls of today's students*. New York: Simon and Schuster; Hirsch, E. D., Jr. (1987). *Cultural Literacy; What Every American Needs to Know*. (With an Appendix, What Literate Americans Know, by E. D. Hirsh, Jr., J. Katt, & J. Trefil.) Boston, MA:

Houghton Mifflin; Sine, Thomas (1995). *Cease fire: searching for sanity in America's culture wars*. Grand Rapids, MI: W.B. Eerdmans Pub. Co.; Jacoby, R. (1994). *Dogmatic wisdom: How the culture wars divert education and distract America*. New York: Doubleday; Wallis, B., Weems, M. & Yanawine, P. (Eds.) (1999). *Art matters: how the culture wars changed America*. New York: New York University Press; Gitlin, T. (1995). *The twilight of common dreams: why America is wracked by culture wars*. New York: Metropolitan Books.

9. An early volley in the science wars was a report from the American Association for the Advancement of Science in 1991. "Science: End of the Frontier?" claimed shrinking federal funding for academic research threatened an end to science as we know it (Mervis, 1991). Fuller (1998) marked "the first salvo of the Science Wars" as occurring in 1992 with the publication of Steven Weinberg's *Dreams of a Final Theory* and Lewis Wolpert's *The Unnatural Nature of Science*, books reflecting a positivistic worldview and criticizing historians, philosophers and sociologists of science who had challenged the common wisdom about what Wolpert termed the nature of science.
10. Gross and Levitt (1994) argued that "the status of science as a reliable, profound, and productive source of knowledge ought to be beyond serious question" and that humanists who were questioning this status were undermining the authority of science. Not all "scientific" thinkers were in full agreement with them. A review of *Higher Superstition* in *Skeptic* magazine (Shallit, 1994) faulted the authors for "indulging in some of the same tactics it decries," mainly "sloppy polemic" **(**para. 1). However, *Skeptic* called the book "a revealing expose" of the

science wars, described as "unprecedented efforts by certain members of the academic left to topple science's dominance as the pre-eminent tool of Western rationalists" (para. 1). In this review, the claims of science critics were labeled "ignorance, pure and simple...commentary without knowledge" (para. 3), "pseudoscientific analysis" and "claptrap" (para. 4). At the same time, though, *Skeptic* accused Gross and Levitt of "undisguised partisanship" (para. 12), calling those they agree with authoritative and marginalizing others. And while Gross and Levitt were praised for "poking fun at the rhetorical pretensions" of science critics, they also were charged "guilty of the same offense" (para. 21). Martin (1996) called *Higher Superstition* "a political intervention...a form of boundary work...a means for bolstering 'science' against funding cutbacks and loss of public credibility" (p. 170).

11. In the academic journal *Lingua Franca*, Sokal (1996a) said he was "troubled by an apparent decline in the standards of rigor in certain precincts of the academic humanities" and wrote his article "so that any competent [scientist] would realize that it is a spoof" (pp. 62-63). That the editors of *Social Text* accepted his article (Sokal, 1996b) for publication "exemplifies the intellectual arrogance" (p. 63) of postmodern thinkers, he said. The Sokal hoax prompted more than a year of heated public debate. In the *New York Review of Books,* physicist Steven Weinberg (1996) praised Sokal's hoax, claiming it "served a public purpose, to attract attention to...a decline of standards of rigor in the academic community...." (p. 11). Asserting his faith in the positivistic worldview, Weinberg said "if we ever discover intelligent creatures on some distant planet and translate their

scientific works, we will find that we and they have discovered the same laws" (p. 14). He concluded by observing: "We will need to confirm and strengthen the vision of a rationally understandable world if we are to protect ourselves from the irrational tendencies that still beset humanity" (p. 15). In a 1998 *Science* magazine essay entitled "Popular culture and the threat to rational inquiry," physicist Douglas Hofstadter echoed these concerns, claiming contemporary society was anti-science.

12. Ofshe is emeritus professor in the department of sociology at the University of California-Berkeley. *Making Monsters* was released in the same year as *Abduction*, by the same publisher, Scribner's. Ofshe describes his research interests include "coercive social control; social psychology; influence in police interrogation; influence leading to pseudo-memory in psychotherapy" (n.p.). His published papers include such titles as "The Decision to Confess Falsely: Rational Choice and Irrational Action" (*Denver University Law Review*), "The Consequences of False Confessions: Miscarriages of Justice and Deprivations of Liberty in the Age of Psychological Interrogation" (*Journal of Criminal Law and Criminology*), and "Coerced Confessions: The Logic of Seemingly Irrational Action" (*Cultic Studies Journal*). I obtained this information on Ofshe's research and publications from his U.S.-Berkeley faculty Web page. Retrieved September 8, 2004, from http://sociology.berkeley.edu/faculty/OFSHE/. According to the False Memory Syndrome Foundation, Ofshe has served as an advisor to that group.

13. The False Memory Syndrome Foundation claims its “focus [is] on science.” It offers information on “the current controversy about the accuracy of adult claims of "repressed" memories of childhood sexual abuse that are often made decades after the alleged events, for which there is no external corroboration.” Information accessed on the World Wide Web June 10, 1997, at: http://www.fmsf.org. The foundation succeeded in its mass media campaign to reconstruct this concept into something called “false memory syndrome”: I documented how the media participated in reconstructing the concept of repressed and recovered memory as “false memory syndrome” in a paper, “Controlling minds and memories: medicine, the media, and the social construction of mental disorders,” written for an independent study project supervised by James Capshew, Department of the History and Philosophy of Science, Indiana University, summer semester II, 1997.
14. One widely publicized report ostensibly aimed at journalists and scientists (Hartz & Chappell, 1997) made the claims that: the public is ignorant about science but needs to understand it to appreciate and support it, scientists are responsible for informing the public about science, and journalists are responsible for working with scientists to convey this information to the public. Science in the United States “has no organized constituency except itself...no spare cash...and little experience in...Washington politics,” and thus “science is justifiably worried that it is now playing a losing game.” The report expressed concerns about “unscientific Americans,” “unfriendly assessments,” “rampant illiteracy,” “scientists who don’t speak English [and] reporters who don’t speak science” (p. v).

15. Fox TV's lineup for the '90s included the documentary *"Alien Autopsy: (Fact or Fiction?),"* broadcast in 1995; the popular series *"The X-Files,"* frequently dealing with alien visitations; *"Strange Universe,"* a paranormal-news program broadcast Monday through Friday; *"Dark Skies,"* a series dealing with an alien conspiracy, premiering in fall 1996; and *"Alien Nation: The Enemy Within,"* a made-for-TV movie broadcast in November 1996. Meanwhile, NBC offered its humorous take on the alien-invasion story, the series *"Third Rock from the Sun"*; PBS broadcast the "NOVA" documentary *"Kidnapped by UFOs?"* in February 1996; and the Hollywood blockbuster "*Independence Day"* opened on the 4th of July, 1996, preceded by a sneak preview at the White House.
16. It is worth noting that the American Physical Society's attempt to establish an "official" definition of science, "to help the public sort science from nonsense," was a failure. Even its own members could not reach agreement on the public meaning of science. See Fountain (1998).
17. The American Association for the Advancement of Science reported in the November 2003 issue of the e-newsletter "AAAS Advances" that the U.S. Congress would be approving "a record-breaking $126 billion" for research and development in fiscal year 2004.
18. In *Cultural Boundaries of Science,* Gieryn (1999) sought "to make the science wars historically mundane by showing that they are of a piece with the five episodes of cultural cartography" (p. 337) he documented in the book.
19. In *Pictures at an Execution* (Lesser, 1993), her analysis of murder in the mass media and elsewhere in contemporary culture, critic Wendy Lesser explains that

she chose a particular case to study — a controversy over media access to a prison execution — because it was "odd and compelling" (p. 25). It was explicitly about one thing — First Amendment rights — she says, and implicitly about many other things -- public fascination with murder, controversy over the death penalty, violence in the media. The Mack case intrigues me in a similar way. It is explicitly about the legitimacy of a scientist's work but could be implicitly about other things.

20. In this study, "illegitimate science" refers to activities labeled "science" by some but deemed illegitimate science, nonscience, pseudoscience or junk science by the scientific establishment, though elsewhere these terms may have separate and distinct meanings.
21. For a discussion of the idea of productive criticism, see Chapter 3, especially Nothstine, Blair, and Copeland (1994) and Ivie (1995, 2001). Like rhetorical criticism, mass communication research can be productive. It can heighten awareness and understanding of public values and public interests; a scholar can contribute to civic life by broadening understanding of communications between scientists and journalists and the way that values and interests play out in these communications. Productive criticism is addressed in greater depth in Chapter 3.
22. According to the sensitizing concept of boundary-work, boundary-workers use intellectual constructs such as fact, reason, logic, and objectivity to establish and maintain boundaries between science and other cultural practices associated with what are considered to be "non-scientific" qualities, such as faith and belief. The social constructivist perspective on boundary-work assumes, however, that "no

demarcation principles work universally and...the separation of science from other knowledge-producing activities is instead a contextually contingent and interests-driven pragmatic accomplishment drawing selectively on inconsistent and ambiguous attributes" (Gieryn, 1995, p. 393).

23. These common conceptions of science and journalism reflect the conventional transmission or cognitive-deficit model (Carey, 1992; Gross, 1974) of communication as a one-way process in which information is transmitted from informed authoritative sources to uninformed audiences. In the case of science communication, scientists determine what non-scientists need to know about science and convey that information to ignorant non-scientists, and journalists serve as conduits for relaying this information to the public. Though it may be considered outdated, no longer the dominant model, in science communication research, the deficit model is believed to be still "generally followed by scientists" (Gregory & Miller, 1998, p. 97) and "pervasive" in public discourse about science (Nieman, 2000, p. 21). See Chapter 2 for further discussion of these common conceptions.
24. In my judgment, Harvard Medical School's investigation of Mack's abduction research methods and the media's interest in this investigation were evidence that the scientific community has taken Mack's work seriously.
25. For the purposes of this study, discourse encompasses spoken and written communication among scientists, between scientists and journalists, between scientists and the public, between journalists and the public in which cultural roles, functions, and ideologies are defined, executed, affirmed, and questioned.

26. I contributed a chapter to a book on the search for extraterrestrial intelligence (Bova, B. (Ed.) (1990). *First contact: the search for extraterrestrial intelligence*. New York: New American Library.) Since September 2002, I have been on the payroll of the SETI Institute.

Chapter 2

Science, rhetoric, and journalism studies:

context for analysis

Exploring the central question of this research project — how do journalists participate in the social construction of scientific authority? — calls for some consideration of what "science" is, in this case and elsewhere. No single, simple definition exists; science means different things to different people in different situations. As Wynne (1991) has noted, "There is no clear consensus even among scientists themselves as to what is 'science'...in any specific contexts" (p. 112). "The extraordinary variation in responses" to the question of what science is "should lead us to treat the idea of 'science' as an evaluative resource," Woolgar (1988) has observed, "rather than as a definitive entity" (p. 13). The aim of this case study, for example, is to examine what "science" was said to be by various actors in various texts not as a factual description of what scientists typically do, or know, but as a justification for the cultural authority that scientists typically claim to delineate the boundaries of what counts as reality.

This study proceeds on the assumption that "science is a historically situated and social activity...to be understood in relation to the contexts in which it occurs" (Shapin, 1996, p. 9). It also starts with the assumption that the conventional, public, scientific worldview is

positivistic.[1] Bacon (1955) defined science as a "marriage between the empirical and the rational faculty," dedicated to seeking knowledge and explaining the world (p. 425). Bacon's emphasis on observing, describing, cataloging, and categorizing the natural world persists as a key element of the positivistic scientific worldview — to name it is to know it. Western thinkers over four centuries have maintained this positivistic conception of science as "a unique form of knowledge whose power transcends the particularities of time and place" (Fuller, 1996, p. 31). In this worldview, reality is physical and objective[2], and science provides knowledge of this physical reality (Elias, 1982; Woolgar, 1988). Science in this conception becomes a "major knowledge-producing institution" (Whitley, 1984, p. 11), "a privileged realm of knowledge" (Woolgar, 1988, p. 7), "an icon of modern society" (Wynne, 1991, p. 112), "the major paradigm of a knowledge-seeking enterprise" (Giere, 1987, p. 152). Scientific observation becomes "independent of any theory or background beliefs, [and] nothing is meaningful unless it is empirically testable" (Woolgar, 1988, p. 56). In this view, the practice of science is framed as "an inherently unideological...heroic intellectual enterprise whose findings are apolitical, ahistorical and necessarily true" (Dornan, 1988).

A contemporary definition of science, articulated by the U.S. National Academy of Sciences (1998) and presented here as official and authoritative, reflects this positivistic worldview:

> Science is a particular way of knowing about the world.... In science, explanations are restricted to those that can be inferred from...data...obtained through observations and experiments that can be substantiated by other scientists. Anything that can be observed or measured is amenable to scientific investigation.... 'Understanding' in science means relating one natural phenomenon to another and recognizing the causes and effects of phenomena....

> The statements of science must invoke only natural things and processes. The statements of science are those that emerge from the application of human intelligence to data obtained from observation and experiment (National Academy of Sciences, 1998, pp. 27, 42).

In a vague nod to constructivism, the Academy has also conceded that scientific knowledge is legitimated not only by empirical observations but also by scientists' interactions, the peer-review and publication process, and the use of approved methods (National Academy of Sciences, 1995). The Academy's views point to what Shapin (1996) called "the paradox that lies at the heart of science and that was, arguably, put there in the seventeenth century [concerning] the relation between the objective and disinterested identity of the natural sciences and the everyday world of subjectivity, passions, and interests" (p. 164).

The construction of science, knowledge, and authority

To understand the nature and role of scientific authority, it is important to consider how it is, and has been, constructed, and to examine the construction of scientific authority as an aspect of the construction of science — as an ideology, a worldview, a belief system that defines an authoritative role for science and scientists in culture, conveying credibility, legitimacy, influence, and power.

The perspective of positivism originated as a 19th century political philosophy intended to construct and sustain scientific authority (Ackerman, 1985). "In order to draw a boundary around science to highlight its unique status...positivists construed science as resting on paradigmatically clear, carefully prepared observation and experiment" (p. 16),

with the aim of establishing that the only legitimate knowledge was knowledge validated in this way. Positivistic science was constructed as the voice of reason and an essential element of democracy (Ben-David, 1991), and scientists thus acquired an important cultural role "as producers and validators of knowledge claims about their natural and social environments" (Whitley, 1984, p. 1).

Positivists from Comte in the 19th century to contemporary positivist philosophers have sought, according to Young (1995), "on the one hand to separate facts from values and then...claim that the value-neutral, objective findings and theories of science somehow bring forth an untainted set of values which magically emerges from the progress of reason itself" (p. 5**).** In Latour's (1987) view, science is "the outcome of attributing the whole responsibility for producing facts to a happy few...to them alone is attributed the power to make all the others believe and behave" (p. 174). These elite few maintain the boundaries of science by labeling what they deem nonscientific knowledge subjective, irrational belief, as compared to legitimate scientific knowledge, which they deem objective, rational, "independent of who holds it" (p. 174).[2]

Though questions arose about the positivistic conception of science early in the 20th century, nonetheless a positivistic, even scientistic[3], worldview "dominated [Western] intellectual circles" (Ben-David, 1991, p. 547) into the post-World-War-II period, sustained by "popular belief in the omnipotence of science" (p. 551). Merton (1996) articulated a conception of science as a collegial, objective social enterprise in which scientists operated according to norms of worldview, methodology, popularization and

publicity. To obtain and retain legitimacy and authority in their profession, scientists agreed to uphold these norms. Their status in their organizations, and their peer-reviewed publications, contributed to their legitimacy and authority as well (Merton, 1957, 1973). Kuhn (1970) promulgated the idea that scientific reality and legitimacy — "normal science" — depend on paradigmatic consensus among scientists. In his view, normal science depends on "the assumption that the scientific community knows what the world is like" and that community's "willingness to defend that assumption" (p. 5). Since Merton and Kuhn, scholars interested in the role of science in culture have examined the worldview, practices, role, and value of science from various perspectives. "As a product of human activity," said Levins (1996), science "reflects the conditions of its production and the viewpoints of its producers or owners.... The pattern of knowledge or ignorance in science is not dictated by nature but is structured by interest and belief" (pp. 182-183). Whether viewed as practice, process, institution, or ideology, science is "a cultural phenomenon" (Woolgar, 1988, p. 12). It is "a part of common culture, integrally tied to social practices, public policies, and political affairs" (Nelkin, 1995b, p. vii). "Science *is* culture," Haraway (1991, p. 230) observed, and media and other public conceptions of science are social representations that can, and should, be studied (Farr, 1993).

"The primary ideal of science is 'truth', " Collins (1993, p. 302) observed. This "sacred object" of truth "arises from a social community and symbolizes membership in it. One recognizes a scientist first of all as someone who participates actively in this cult of Truth" (p. 303). Carey's (1992) cultural studies perspective on science accommodates the subjectivity and contingency of those scientific knowledge claims:

> Science, rather than a privileged, grounded set of representations, is merely part of the conversation of our culture, though an exceedingly important part...a pattern of discourse adopted for various historical reasons for the achievement of objective truth, where objective truth is no more and no less than the best idea we currently have about how to explain what is going on (p. 80).

Feminist theorists have challenged the primacy of the positivistic conception of scientific "Truth" as well. Haraway (1991), Harding (1991), and Keller (1985) examined the construction of scientific knowledge and argued that it is not the only legitimate form of knowledge, making a case for the legitimacy of situated knowledge, constructed through lived experience.

Studies of the social construction of scientific knowledge have critiqued the objective, disinterested, value-free conception of science (Collins & Pinch, 1979, 1982, 1995; Gieryn, 1983, 1995, 1999; Latour, 1987; Shapin, 1990). In exploring how scientists construct knowledge claims, Collins and Pinch (1995) found that scientists tend to decide case by case whether to accept or reject experimental results, considering contingent factors such as the status of the scientists involved in the experiments. Scientists are "constantly...transforming one another's statements in the direction of facts or of fiction," said Latour (1987), "depending on how those statements serve their interests" (p. 25). "To disbelieve...a fact, " he observed, "is to weaken its case, interrupt its spread" (p. 29). Stocking and Holstein (1993) examined how, like scientific knowledge, ignorance — the absence of knowledge, or uncertainty, incompleteness, bias, error — is socially constructed through claims making: in reporting on their research, scientists typically construct areas of certainty in their field and then construct gaps in knowledge that their own findings aim to fill.

The focus of this study, the construction of scientific authority, has been identified as "a central analytic issue" (Wynne, 1991, p. 111) in science studies. While the scientific establishment derives cultural authority from an idealized conception of "genuine" scientific knowledge (Hilgartner, 1990, p. 533), the authority of science tends, however, to depend "less on what [science] can actually say or do than on the particular interests with whom it is allied and the respect politicians, university officials, corporate executives, investors, and consumers have for it" (Walters, 1997, p. 6). This cultural authority is dependent on scientists' claims of "disinterested commitment to absolute knowledge" (p. 6). But this "dominant view" of science is ambiguous and flexible, allowing "individual experts to gerrymander boundaries to suit their strategic purposes" (Hilgartner, 1990, p. 533).

Research examining "the practical and ideological roles of science" in maintaining social order approaches its subject, Fuller (1997) has claimed, assuming that "knowledge...is rarely value free, but legitimates and reflects the place and thus interests of those who employ it" (p. 9). The cultural or cognitive authority of science and scientists "is the legitimate power (in designated contexts) to define, describe or explain bounded realms of reality" (Gieryn & Figert, 1986, p. 67). This cultural authority derives "not from its presumed capacity for verification across the lines of all the world's cultures but from the authority of...distinctive social entities... sharply bounded professional communities characterized by rigorous procedures for the acculturation of their members" (Hollinger, 1997, p. 15). It is the product of institutions that embody the power of science,

institutions "closely aligned with the general political/economic structures of the society of which they are a part" (Ravetz, 1990, p. 223), and this alignment dates back to the beginnings of American science (see below). This cultural authority has also been called "epistemic authority," characterized as "the probability that particular definitions of reality...will prevail as valid and true" (Gieryn, 1999, p. 1), and it has been said to exist "only in its local and episodic enactment" (p. 12). Competing, conflicting, or controversial claims to scientific authority engender "credibility contests," in which "somebody somewhere seeks to ride science into the public's trust or support or vindication" (p. xi). Scientific credibility has become "an important focus for the social studies of science" (Shapin, 1995, p. 255) since the 1970s because of the declining power of "the grand old narratives that exempted scientific truth from the need to win credibility" (p. 257).

If "the central social function of knowledge is...as a means of orientation," then "people who are able to monopolize the guardianship, transmission, and development of a society's means of orientation" tend to be powerful people (Elias, 1982, p. 37). Scientists stake claims to power on "control over powerful and esoteric knowledge" (Barber, 1990, p. 219), using "their capacity to predict the behavior of narrow closed systems to claim the right to predict and order all human futures" (Carey & Quirk, 1973, p. 485). Claims to scientific authority are claims to the right to declare what the world is like, what is real and what is not, "to define certain kinds of knowledge as legitimate [and] exclude other kinds of knowledge from legitimacy" (Walters, 1997, p. 6). Scientists construct this authority through claims of "neutral reason" (Turner, 2001), and non-scientists contribute

to this construction process by accepting these claims. The cultural authority and political power of science stems in part from "the power of images and promises" of improvement, progress and prosperity to come from advances in science, "all of which can reinforce the power of any state" (Jacob, 1994, p. 2). If power is "the ability to get what one wants" (Parenti, 1978, as quoted in Shoemaker & Reese, 1996, p. 58), then scientific authority may be seen as a source of the power of scientists to get what they want. And one thing scientists want is to maintain their cultural authority. The cultural space of science is a site of struggle for monopoly over authority, a struggle to determine who has the right to speak for science (Bourdieu, 1991).

Science has come to be seen as "a rationality monopoly" (Ross, 1996, p. 10), and while rationality is generally considered to be a norm of science, it has also been described as "the mantle of those in power, those with authority" (Restivo, 1989, p. 158). One of Latour's (1987) principles for studying science in action is that "irrationality is always an accusation made by someone building a network over someone else who stands in the way" (p. 259). From Ross's (1991) perspective, "science's anxiety about authenticating its belief in truths is...a question of power" (p. 24).

Rosenberg (1996) has argued that the apparent connection between scientific knowledge and scientific authority is "not a necessary...response to complexity in social structure, but an arbitrary imposition of interested control" (p. 5), and Fuller (1997) has argued that even "democratic governments" have used "appeals to scientific authority...to coerce the people" (p. 60). Like political institutions, members of the social institution of science

sustain their chosen worldview by promising that in accordance with that view, science can tame chaos, provide order and maintain control (Rouse, 1996). The Mertonian scientific ethos— those "shared norms that foster scientific cohesiveness…and...restrict entry to science" — is a tool that scientists can and do use to maintain and reinforce (that is, construct) "the authority and autonomy of the scientific enterprise" (Brante, 1993, p. 184).

The conventional conception of science as "pure" and "value-free" has been declared "in shambles," but at the same time, Jacob (1994) has claimed, "large numbers of scientists...still believe in one version or another of it" (p. 5). While studies have established that science exists and occurs in a social context, the idea that science exists and operates independent of historical and cultural context persists, lending support to an "authoritarian image" of science (Collins & Pinch, 1993, p. 142). While science "generates reliable information about the empirical world," it is also (to paraphrase von Clausewitz) the continuation of politics and policy by other means (Harding, 1991, p. 10). "The authority of science legitimates particular positions and certain groups' powers, and it provides languages and metaphors that shape and limit debate" (Walters 1997, p. 5).

While "tacit knowledge" and "informed intuition" are important to science (Porter, 1995), "the public rhetoric of scientific expertise...studiously ignores" them (p. 7). Scientists instead prefer to maintain an image of "impersonality...the exclusion of judgment, the struggle against subjectivity" (p. viii), from which they derive cultural

authority. Rhetorically invoking the symbols of science, such as objectivity, skepticism, even the stereotypical white lab coat, conjures and reinforces the cultural authority of science (Toumey, 1997). Scientific objectivity has been examined as "a rhetorical — and political — tool, masking the rather messier and negotiated nature of the scientific enterprise" (Rosenberg, 1996, p. 17). What counts as legitimate scientific knowledge in a given social context "may count as mere belief in another" (Barnes, 1990, p. 60). "The more a body of knowledge is understood to be objective and disinterested, the more valuable it is as a tool in moral and political action" (Shapin, 1996, p. 164).

The conventional concept of scientific objectivity "carries with it a wealth of subjective meanings," according to Keller (1985), and conventional scientific knowledge claims "are not themselves objective in origin but in fact grow out of an emotional substructure" (p. 96). Haraway (1991) asserted that "feminist objectivity means quite simply situated knowledge," and so-called objective scientific knowledge claims can be deconstructed to reveal their "radical historical specificity, and so [their] contestability" (p. 188). Harding's (1987) feminist empiricism, granting legitimacy to subjective knowledge acquired by experience, provides a framework by which an observer can "see the world in an enlarged perspective" (p. 127).

The institutionalization and professionalization of American science, from the 19th century to the present, contributed to constructing the cultural authority, and the elite and "official" status, of science and scientists (Ben-David, 1991; Bruce, 1987; Daniels, 1996; Greene, 1984; Slotten, 1996; Walters, 1997; Weingart, 1982).[4] American scientists

established themselves as a "power elite" in the 19th century (Weingart, 1982, p. 71), constructing their cultural authority through claims to knowledge that promised to solve problems. Standardization of scientific procedures, the designation of certain tasks as exclusively scientific, rhetorical claims for the public value of science, the appointment of scientists "as interpreters of natural law" (Daniels, 1996, pp. 22-36) and the demarcation of science from religion (Whitley, 1982) all contributed to the professionalization of scientists as well.

Academics took the lead in creating an American scientific establishment and, concomitantly, scientific authority, from the start (Bruce, 1987). Academic scientists continue to "form the ruling groups of scientific work" and take the lead in "fighting scientific controversies or establishing consensus" (Elias, 1982, p. vii). Science is a "reputational organization" (Whitley, 1982, p. 315), and the cultural authority of scientists depends greatly on their credentials and "the respectability of his or her institution" (Collins & Pinch, 1993, p. 18). Membership in the scientific establishment continues to depend on what the leaders of that establishment consider to be proper credentials — degrees, affiliation, accomplishments, publication, recognition.

The language, discourse, and rhetoric of science

According to Gieryn (1983), "'science' is no single thing: its boundaries are drawn and redrawn in flexible, historically changing and sometimes ambiguous ways" (p. 781). This study proceeds on the assumptions that "science" is a mutable, contextual, contingent, constructed "thing" and that the boundaries of the cultural "space" of science[5] are

rhetorically constructed (Gieryn, 1983, 1995, 1999). Language, discourse, and rhetoric are examined in this study as tools for constructing the boundaries of scientific reality and authority, particularly as they are deployed in journalists' stories about John Mack's controversial scientific claims.

Meaning and power, said Bourdieu (1991), derive from communicators themselves and their social milieu, through discourse. The language, discourse, and rhetoric of science are key sources — arguably the sole sources, for the purposes of this study — of the cultural authority of science. They embody "a collection of formal understandings that aim at communality and communal power" (Montgomery, 1996, p. 430). "The cultural power of science, as embedded in language and metaphor, helps structure how Americans think and talk about their society" (Walters, 1997, pp. 6-7). The study of the language, discourse, and rhetoric of science is important because the language of science and the content of science are interlinked (Golinski, 1990).

Scholars have examined the social construction of science in discourse (Collier with Toomey, 1997; Gilbert & Mulkay, 1984); the rhetorical construction of scientific knowledge and ignorance claims (Latour, 1987; Stocking & Holstein, 1993 (see above); Woolgar, 1988), the role of rhetoric in public understanding of science (Gross, 1994), the language of science in the media (Dornan, 1988, 1990), rhetoric in the politics of science (Jacob, 1994; Lessl, 1988; Montgomery, 1996; Walters, 1997), the rhetoric of scientism (Lessl, 1996), scientific discourse in "deviant" science (Locke, 1994), the demarcation of science from non-science as a rhetorical problem (Holmquest, 1990), and the rhetoric of

scientists in the so-called science wars (Mellor, 1999). Research has examined the kinds of rhetorical strategies that scientists employ in constructing the boundaries of science and the ways in which the language they use serves as a key source of their cultural authority.

Studies of the rhetoric that scientists employ to construct and maintain the objectivity, and thus the authority, of their work have examined how scientists in public discourse, including media reports, work to establish and reinforce the limits of legitimate science in debating, accepting, rejecting or excluding various claims. Scientists use the rhetorical tool of demarcation, Gieryn (1983, 1995, 1999) wrote, to distinguish legitimate science from non-science. Popularization, Hilgartner (1990) wrote, is a type of demarcation scientists use to marginalize claims they want to keep outside the boundaries of legitimacy. Hilgartner (2000) also explored how science advisory boards rhetorically construct, or dramatically "enact" (p. 6), their credibility and authority as experts, examining in detail how "the framing of problems, the presentation of evidence, and the basic structure of texts" (p. 9) in scientific advisory reports contribute to this symbolic action. Objectivity and subjectivity are "staple terms of discourse about science," according to Latour (1987, p. 183), continually deployed in the rhetorical construction of scientific authority and legitimacy, and scientific objectivity may be the most important rhetorical tool that scientists employ in maintaining their cultural authority.

Scientific and non-scientific "public" communities "are ceaselessly at work in defining themselves and the nature of the distinctions that divide them," Shapin (1990) wrote, and

in the process of drawing these boundaries "they also define what is to count as knowledge and the proper means of securing it" (pp. 998-999). Maintaining a public image of "pure" science requires a contrasting idea of "contaminated" science, and scientists use these concepts of purity and contamination in public discourse to draw boundaries between official and popular, legitimate and illegitimate science in their efforts to maintain their cultural authority (Hilgartner, 1990). The discourse of so-called alternative scientific claims has been examined as "part of the ongoing demarcation debate about 'false' and 'true' science" (Ross, 1991, p. 23), revealing that the demarcation of the dominant culture of legitimate science from the subordinate culture of non-science "is *always*...determined by the cultural and ideological circumstances of its day, and thus by the particular claims that 'science' and 'scientists' make for themselves in a particular time and place" (p. 23).

The claim has been made that "scientists are engaged in the process of persuasion," the classical aim of rhetoric, "in all of their professional and intellectual activities" (Gross, 1994, p. 3). "The persuasive power of much of science is connected to the notion that the truth of science — scientific facts — is universal and demonstrated" (Collier with Toomey, 1997, p. 152). Scientists employ their own specialized rhetoric in communicating with peers, the press, and the public to establish that their claims are legitimate and to reinforce or challenge beliefs (Gross, 1994). They also employ interpretive flexibility in discourse, describing their work in different ways for different audiences and different purposes (Gilbert & Mulkay, 1984; Zehr, 1994b). They establish their authority in discourse by using technical language to establish boundaries of

expertise and by employing narratives and modes of expression "that enable collective remembering and forgetting" (Fuller, 1997, p. 23). The detached, depersonalized language of the specialist renders the ordinary and familiar extraordinary and unfamiliar, in the process demarcating insiders, who can speak with authority, from outsiders, who cannot (Montgomery, 1996). Deployment of this "orthodox rhetoric" (Lessl, 1988) of science serves a ritual purpose, enabling scientists to continually reaffirm their authority and reinforce the boundaries of legitimate science.

Epideictic rhetoric — the rhetoric of praising or blaming — can be employed to "excommunicate" scientists who step outside those boundaries and publicly contest orthodox scientific theory, Sullivan (1994) wrote, thus sustaining the cultural authority of science. "Descriptions of science as…objective or rational," Gieryn (1983) observed, "may best be analyzed as ideologies…useful for scientists' pursuit of authority" (pp. 792-793). Lessl (1996) has identified the rhetoric of scientism as "an enduring feature of the public ideology of science, one that is key to deciphering the enabling symbolic forces which scientists wield in their efforts to keep science at the center of modern culture" (p. 379). Research in the rhetoric of science has examined how scientists employ rhetoric to persuade peers, the press, and the public that their claims are legitimate, to reinforce or challenge beliefs (Gross, 1994). The discourse of science aims "toward securing the cooperation of the media in the affirmation of [the proper] understanding of the scientific endeavor" (Dornan, 1988), that is, "science as a heroic intellectual enterprise" (p. 55; see above). In this public discourse scientific literacy is commonly advocated as an important social goal (Dornan, 1990), reinforcing the conventional, positivistic

conception of science. Examination of the deployment of rhetoric in the discourse of science, particularly as reported in the media, can shed some light on the roles, functions, worldviews, and authority of scientists.

The construction of scientific controversy

Science claims serve particular interests (Evans & Priest, 1995), and public disputes over claims relating to the uses and outcomes of science are often "struggles over...power and control" (Nelkin, 1995a, p. 445). In scientific controversies "claims of expertise, integrity, and disinterestedness battle against accusations of incompetence, dishonesty, and bias, in a war of dramatic narratives" (Hilgartner, 2000, p. 15). As research has highlighted the key role of rhetoric in the construction of scientific authority (see above), so studies have explored the important role of rhetoric in the construction of scientific controversies and controversial science (Brante, 1993; Collins & Pinch, 1982; Gieryn, 1999; Gieryn & Figert, 1986, 1992; Hagendijk & Meeus, 1993; McMullin, 1987; Sullivan, 1994). Scholars have analyzed journalists' rhetorical treatment of "maverick" science and scientists (Bucchi 1996, 1998; Dearing, 1995), and they have considered the role of the media in scientists' efforts to reject or exclude other scientists deemed in violation of the ethos of science (Collins & Pinch, 1993; Gieryn, 1992; Gieryn & Figert, 1986; Sullivan, 1994).

Scientific controversies are a fruitful site for studying the social construction of science, according to Brante (1993), because they tend to foreground assumptions about science that are usually kept in the background. Nelkin (1995a) said that studies of disputes over

scientific knowledge claims could reveal the interests, the politics, behind the claims. McMullin (1987) described disputes among scientists over competing or unproven claims as situations "where the consensus of the community breaks down" (p. 63). Such disagreements are commonly epistemic disputes, arguments over beliefs. Brante (1993) identified "epistemological, sociological, and political reasons for studying...scientific and science-based controversies," including growing dependence on scientific knowledge, the increasing politicization of science, and "the escalating occurrence" (p. 178) of these disputes.

Brante delineated a difference between controversial science — what he described as epistemological conflicts over science claims, involving "contradictory scientific beliefs… reflect[ing] the existence of contrary accounts of a phenomenon… that do not necessarily lead to open confrontation" — and science controversies — what he characterized as sociopolitical conflicts concerning "contending knowledge claims where at least one of the parties has scientific status" (p. 181). Making a point that is especially relevant to this analysis, Brante himself also noted that, "in certain respects, the different between scientific and science-based controversies is a matter of degree" (p. 181). From the conventional positivistic perspective, scientific controversies appear to be "asymmetrical" because "it is assumed that there is one basic truth underlying the debate" (p. 183). From the constructivist perspective, however, it is assumed that truth claims are constructed and that these claims can thus be deconstructed (Haraway, 1991). "Controversy in science is best understood," Mendelsohn (1987) claimed, "in terms of both the intellectual content of the discussion and the context of social interests that

guided the participants" (p.121). "Experts are the primary actors" in science-based controversies, their role "located in between the realms of scientific knowledge and political action," Brante said (1993, pp. 181-182). In seeking evidence of "hidden norms and values within scientific communities," it is useful to look for expressions of "indignation...charges of rule violation" (p. 182).

Gieryn (1999) documented rhetorical tactics employed to draw and redraw the boundaries between science and non-science in scientific controversies over phrenology and cold fusion, for example. Gieryn and Figert (1986) examined what they called the posthumous "status degradation" (p. 67) of prominent British scientist Sir Cyril Burt following accusations of fraud, a case in which journalists played a key role by first publicly airing these accusations. Collins and Pinch (1982) explored how orthodox scientists reject controversial knowledge claims, employing "implicit rejection" by ignoring rival knowledge claims and "explicit rejection" by engaging in controversies over rival claims, in both the "constitutive," or official, and the "contingent," or popular, discourse (p. 152). Strategies and tactics of rejection employed by scientists in both official and popular discourse range from "blank refusal to believe" to "association with unscientific beliefs...accusations of triviality...unfavorable comparisons with canonical versions of scientific method" and ad-hominem arguments (p. 164).

Scientific controversies have also been explored as metanarratives employing the interplay among a wide range of scientific and non-scientific actors, represented in an equally wide range of scientific and non-scientific texts, to challenge or affirm

knowledge claims (Hagendijk & Meeus, 1993). Journalistic and other types of non-scientific texts have been shown to play a role in process of constructing scientific facts, through intertextual references to knowledge claims and counterclaims (Hagendijk & Meeus, 1993).

The practices of journalists

If the language, discourse, and rhetoric of science play a key role in the social construction of science and scientific authority, then the mass media promise to be a ripe site for observing work in progress. Studies of the practice of news production — journalism in general and science journalism in particular — provide insights that are useful to this study. "News" is not something that journalists find but something that journalists participate in constructing (Berkowitz, 1997), and as scientists construct "science" through discourse, journalists construct "news" through discourse (Gamson & Modigliani, 1987). In Carey's (1992) ritual conception of communication, "the purpose of news is not to represent and inform but to signal, tell a story, and activate inquiry" (p. 82). News can be conceived as a form and a product of culture (Schudson, 1995), maintaining culture over time through storytelling (Berkowitz, 1997). Journalists are "cultural actors" who produce news according to a system of "stored cultural meanings and patterns of discourse" (Schudson, 1995, pp. 14-15). Media content is a source and a manifestation of culture, a form of cultural mapping that contributes to the construction of social norms and deviance, and journalistic standards and practices are means of defining media content, constructing news (Carey, 1997; Ericson, et al, 1987; Shoemaker & Reese, 1996).

As it has for scientists, professionalization has enabled journalists to construct and maintain cultural authority for themselves — a role in defining what is news and what is not (Berkowitz, 1997; Ericson et al, 1987; Gans, 1979; Gitlin, 1980; Shoemaker & Reese, 1996; Schudson, 1991; Soloski, 1989; Tuchman, 1972, 1974). As it does for scientists, journalists' cultural authority and credibility depends on knowledge, in their case knowledge of the so-called facts that make up the news and the authoritative sources of these facts. Journalists construct their cultural authority by providing credible depictions of social reality, employing their "god-terms of facts, truth, and reality" to do so (Zelizer, 2004b, p. 100). Just as a scientist's claims to objectivity and truth support the idea of science as a matter of facts and reality, a journalist's claims to "being factual and impartial helps establish the epistemological status of news as a source of factual information and the authority of news as a mirror of reality" (Pan & Kosicki, 1993, p. 62). Journalists, like scientists, work continually to maintain their credibility and authority with the public as well as with their official, elite sources and audiences (Schudson, 1995). "Journalists could not function without professional routines and gate-keeping standards" (Bennett, Pickard, Iozzi, Schroeder, Lagos, & Caswell, 2004, p. 440). Journalists make choices in constructing the news that favor the interests of elites, in ways that are not necessarily conscious but "embedded in the routines of the profession...and understood as good journalism" (p. 452). By adhering to professional standards, practices, values and conventions, journalists participate in constructing and reconstructing social norms and, thus, deviance (Gans, 1979; Gitlin, 1980; Ericson et al, 1987; Shoemaker & Reese, 1996; Tuchman, 1972, 1974).

Tuchman (1972, 1974) found that journalists: draw on and reproduce social institutions in making news, create webs of "facticity" to legitimize news that also legitimate the status quo, employ socially constructed "news nets" to order the social world and separate news from non-news, identify news by complying with professional norms, typify events in order to classify them as news, and rely on a narrative format that requires "facts" and sources. Gans (1979) observed that social order is a key news value. He found that journalists routinize news selection by following conventions regarding sources (who counts as official, authoritative, and credible), substance (timeliness, controversy, prominence, the unusual), value (utility, entertainment), and audience appeal (human interest) in deciding what is news; and that they employ story selling, story buying, and story highlighting – the construction of what he called a highlighted reality — in the process of deciding what is news. Gans observed that journalists engage in self-censorship by cooperating with people in power, and he noted that they do not appear to be aware of conforming to social norms. Journalists reaffirm "the ideological status quo...by ridiculing" deviance, Shoemaker and Reese (1996) reported; "the more deviant people or events are... the more likely they are to be stereotyped" (p. 225), trivialized or portrayed as dangerous. Journalistic practices that contribute to maintaining the status quo range from organizational-level media routines (pack journalism, reliance on other media, adherence to a standard set of news values) to professional conventions (objectivity, balance, fairness) to individual biases rooted in factors such as gender and class (Gans, 1979; Shoemaker & Reese, 1996). Among values and beliefs that contribute

to journalists' decisions about what counts as news are ethnocentrism, "responsible capitalism," individualism, moderation, social order and leadership (Gans, 1979).

Like scientists, journalists adhere to professional conventions of objectivity, skepticism, and verifiability as a way of sustaining their cultural authority. The journalistic convention of objectivity has been deemed the most important in the profession (Lichtenberg, 1991; Soloski, 1989), and journalists have been observed to employ it as a "strategic ritual" (Tuchman, 1972, p. 660), a defensive routine to protect themselves from criticism (also see Gans, 1979; Tuchman, 1974). Journalistic objectivity is related to but not the same as scientific objectivity (Nelkin, 1995b). Gans (1979) observed that journalistic and scientific objectivity depend on "the use of similar fact-fathering methods" and that both journalistic method and scientific method are "validated by consensus" (p. 183). However, while both types of objectivity call for maintaining an appearance of neutrality, empirical verification is central to scientific objectivity while the values of balance and fairness are central to journalistic objectivity. Though journalists subscribe to the convention of objectivity as a means of avoiding bias, objectivity it has become a sort of bias in itself, according to Schudson (1978), an element of the social construction of news that keeps journalists dependent on official stories and sources. By accepting the idea of value-free reporting, journalists "accept the boundaries, values, and ideological rules of the game established and interpreted by elite sources" (Shoemaker & Reese, 1996, p. 244). "News routines are skewed toward representing demands, individuals, and frames which do not fundamentally contradict *the dominant hegemonic principles*," Gitlin (1980) has said, including "the legitimacy of the

social order secured and defined by dominant elites" (p. 20). "Simply by doing their jobs, journalists tend to serve...elite definitions of reality," he observed (p. 12). Like most scientific accounts of reality, most journalistic accounts "are presented from the inside out," according to Durham (M. G. Durham, 1998); "information is collected and interpreted by people who are inside the dominant social order about those who are either inside or outside it, with no overt acknowledgment of these social locations or the implications thereof" (p. 129).

Researchers have variously described the social and cultural roles and functions of journalists and journalism. Gans (1979) identified some of the functions of journalists as leadership testing, supplying political feedback, distributing power, safeguarding moral values, maintaining social order, constructing nation and society, performing prophetic and priestly rituals, telling stories and making myths, and managing "the symbolic arena" (pp. 291-299). According to Carey (1997), "explanation by rational motives is the archetype of journalism as it is of the culture" (p. 176). But while what journalists are expected to do is explain things, what they actually do is ritualistically construct and enforce social norms, he observed. By engaging in what Marvin (1997) called "the ritual practice of yielding interpretive authority to experts" (p. 122), journalists can convey the appearance of distancing themselves from the worldviews and values they depict in their stories. Media content tends to lean toward official stories, and journalists tend to rely on expert, authoritative, official sources inclined to maintain the status quo (Ericson, et al, 1987; Parenti, 1993; Shoemaker & Reese, 1996). "Giving serious attention to non-official sources" is considered "unnewsworthy" (Shoemaker & Reese, 1996, p. 244). And if

journalists should happen to challenge accepted, official norms, "elites…respond to media as a class" (Shoemaker & Reese, 1996, p. 270).

Elite media are the primary focus of this analysis because they reach large audiences and tend to set the boundaries of coverage for other media outlets. Elite media have national reach, and their audiences include influential elites in government, industry, and academia. *The New York Times* is the prototypical elite medium: a large-circulation daily newspaper read nationwide (and worldwide). Typically described as "the most respected newspaper in the country" (Tifft & Jones, 1999), it sets the agenda for other media, serving as a newspaper of record, a routine channel for breaking official stories, and an authoritative source for other news organizations. The *Times* has been declared the paper "most likely to be read by other journalists and the most dominant influence on the daily editorial decisions of other news organizations" (Bennett, Pickard, Iozzi, Schroeder, Lagos, & Caswell, 2004). "The news media have always been a more important forum for communication among elites...than with the general population," Schudson (1991, p. 156) has observed. And "who writes the story matters," Schudson (1995, p. 8) has said, noting that mainstream journalists tend to be members of the same socioeconomic class as their official sources and tend to share and thus reflect the views and values of those sources. Gitlin (1980) explored how social structure outside the news organization shapes the news, how news reflects the values of the dominant culture, and how journalists participate in maintaining those values. Gans (1979) concluded that journalists function as power distributors, moral guardians, barometers of order, agents of social control,

managers of symbolic reality. And Altschull (1995) asserted that "the media are agents of those who exercise political and economic power" (p. 440).

The practices of science journalists

While science journalism may have some features that distinguish it from other sorts of journalism, journalists reporting on science generally adhere to the same professional standards, practices, conventions, and values that other sorts of journalists do, and thus the content of science journalism generally follows the same outlines as that of journalism in general. As Gregory and Miller (1998) observed, "science journalism is much more about journalism than it is about science," and understanding how journalistic conventions affect representations of science in the news "may offer some insight into the science behind the headlines" (p. 131). Journalism studies have shown, as noted above, that media content leans heavily toward official stories and that journalists routinely tend to rely on official sources inclined to maintain the status quo. Given this official bias, the role of the science journalist can be said to be serving as an intermediary between scientists and non-scientists, translating, documenting and disseminating information to an uninformed public.

Some differences between the practice of journalism and the practice of science journalism have been noted. Science journalists may operate according to some professional norms "that differ not only from those held by others in their media organizations, but also from others in the occupation generally" (Dunwoody, 1992, p. 13). For example, science journalists tend to operate as information specialists while

other sorts of journalists tend to operate as information generalists. Like other journalists, science journalists depend on official sources for news and validate the worldviews of their authoritative scientist-sources in the news. But science journalists appear to be especially dependent on official sources and official stories, and this dependency tends to reinforce the conventional scientific worldview espoused by those sources and in those stories (Nelkin, 1995b). Media coverage of science, Nelkin (1995b) claimed, "reflects the tendency to idealize science as an ultimate authority…the press in effect uses the imprimatur of science to support a particular worldview…with little attention to the substance of science" (p. 25).

Dunwoody (1999) has suggested that science journalists and their sources participate in a "shared culture" (p. 61). Studies have shown how journalists reinforce scientific authority and the conventional scientific worldview through their dependence on official sources (Dearing, 1995; Friedman, Dunwoody, & Rogers, 1986; Nelkin, 1995b). According to Stocking and Holstein (1993), journalists tend to report scientists' ignorance claims without explanation and "emphasize claims that come from sources perceived as culturally legitimate...usually officials or spokespersons for government agencies, or establishment scientists...working at leading research universities or serving on advisory panels to government agencies" (p. 203). Journalists tend to downplay scientific ignorance claims "but when they do use them," they argued, "*it is in ways that reflect and contribute to their own interests* [emphasis in original]" (p. 189). They "never let on to the constructive nature of their own accounts" and "give little attention to the constructed nature" (p. 202) of the ignorance claims they report. Nelkin, 1995b) has argued that "the

media convey a sense of awe about science" (p. 30). But Dearing (1995) has also noted that while "journalists are trained to rely on scientific authority figures [they] are also trained to distrust authorities" (p. 343).

Researchers have found that science journalists traditionally have served as science boosters, heroicized scientists, typified science news as facts, emphasized facts while neglecting practice, focused on individual scientists rather than the scientific endeavor, and addressed practitioners of science rather than those affected by it (LaFollette, 1990; Nelkin, 1995b). Research has also examined how journalists have participated in promoting the positivistic scientific worldview and the idea that public understanding of science in the context of that worldview is of critical importance (Dornan, 1988; Fuller, 1997; Nelkin, 1995b; Woolgar, 1988). Journalists have tended to reflect the view of their official sources that science is "an enterprise crucial to the welfare of Western societies" (Dornan, 1990, p. 48), and many studies of science and the media have followed suit in characterizing the public as scientifically illiterate and assigning the media a critical role in improving literacy (Dornan, 1988, 1990). The claim that public understanding of science is critical to democracy has also been challenged (Lievrouw, 1990). Since the institution of science has "accumulated a great deal of social power," Dunwoody (1992) said, "one would expect [scientists] to try to maintain control over all processes in which they become involved, including the public dissemination of scientific information" (p. 13). While journalists assert that they are "the ultimate arbiters of story content," Dunwoody (1999) observed, "the authority of science is so pervasive that most scholarly

studies of media coverage of science easily detect the fingerprint of science in the construction of meaning" (p. 62).

Lievrouw (1990) explored how scientists use the mass media to publicize their particular representations of legitimate scientific knowledge. Nelkin (1995b) examined science in the media and the "continuing efforts of scientists and scientific societies to manage the media" (p. 157), finding that media coverage of science tends to reinforce "the widely held belief that science is...a neutral source of authority" (p. 63) and that journalistic dependence on scientists for authoritative information about science leads to journalistic reinforcement of the conventional positivistic world view. A content analysis of *The New York Times*'s "Science Times" section (Fursich & Lester, 1996), for example, showed that while journalists appeared to attempt "to place science and scientists within a political and social context," science was generally depicted in "Science Times" as "a pristine endeavor untouched by individual and structural constraints" (p. 37). In this scenario, "scientists do not achieve authority through an arcane stardom but through their participation in the pristine aspects of scientific endeavor" (p. 24).

When journalists report on scientific fraud, "they project a coherent image of scientific ideals," according to Nelkin (1995b), intended to maintain "the purity of science" (p. 29), and in these cases they tend to characterize data, practices, and scientists deemed fraudulent as sinful, scandalous or contaminated (also see Hilgartner, 1990). On the other hand, Dearing (1995) argued that as journalists apply the norm of objectivity to stories about controversial or "maverick" science and scientists, they end up balancing favorable

and unfavorable views on the controversial claims and claimants, in adherence to journalistic conventions, thereby lending credibility to them even "even though the journalists themselves thought that [they] lacked credibility" (p. 341). Journalistic framing can contribute to this outcome as well, by "heightening risk or uncertainty" (p. 341) in order to make a story more interesting. Journalists tend to focus on uncertainty in their reporting on science "because controversy and debate are importance criteria for newsworthy stories" (Friedman, et al, 1999, p. xii).

In science journalism, a relatively small number of journalists affiliated with elite media tend to take the lead in deciding what is news in science. This small pool of elite journalists sets the pace because relatively few media outlets employ full-time science reporters (Friedman, et al, 1986). Dunwoody (1997) described this elite group as an "inner club" (p. 159), an informal association of reporters for elite media including *The New York Times*, the *Washington Post* and *Boston Globe*, *Newsweek*, and the Associated Press. Evans and Priest (1995) have argued that elite media "are over-represented in science news studies in proportion to their readerships" and that some science news studies "implicitly use elite media coverage as a surrogate for 'general' media coverage of science" (p. 331), but this analysis purposely focuses on elite media because of their pace-setting role.

Conclusion

I have found no reports in the literature on studies like this one, studies of the role of journalists in constructing the cultural authority of science and scientists from the

perspective of Burkean rhetorical criticism. Nor has research devoted much attention to examining the cultural authority claimed by and attributed to journalism, "particularly its reverence for facts, truth, and reality" (Zelizer, 2004, p. 110). While Dearing's (1995) study examined how journalists portrayed "maverick" science and scientists in reporting on controversial claims, it was a quantitative content analysis that the researcher himself described as "only descriptive" (p. 357). Dearing recommended that further research on media coverage of maverick science address a broader range of topics and employ methods other than conventional content analysis for exploring how journalists treat maverick science and scientists.

Collins and Pinch (1993, 1982), Gieryn (1983, 1995, 1999), and Gieryn and Figert (1986) provided insights into the role of media coverage of science in constructing the boundaries of science but focused on the role of scientists rather than the role of journalists in constructing the cultural authority of science, and while these studies examined rhetorical strategies they were sociological rather than rhetorical analyses. Sullivan (1994) examined the rhetorical excommunication of scientists by journalists for violating the boundaries of legitimate science. But while he examined media content in depth he focused on television coverage and disputes between the disciplines of chemistry and physics. Nieman's (2000) thesis examined "how the authority to speak about or on behalf of science is established" (p. vi) in mass communication, but his study focused on the discipline of physics, popular accounts of physics, and the visual culture of science.

I have not found any evidence of projects like the one reported here: a social constructivist case study of how elite media have covered controversial research conducted by an elite scientist whose credentials establish him as a legitimate authority among scientists and non-scientists. I also have not located any evidence of mass communication studies relating to this particular case. While building on the research cited in this chapter, this analysis takes a new direction, focusing on an aspect of the social construction of reality not yet addressed in depth and employing the analytic tools of Burkean dramatistic criticism.

Notes

1. See Note 2, Chapter 1.

2. Koertge (1996) is among philosophers of science who have considered the role of the idea of objectivity in scientific legitimacy. In describing what she called the norm of scientific objectivity, Koertge has written:

> " A) Data reported and the conclusions drawn should ideally be completely independent from the personal preferences or idiosyncrasies of the individual scientist.
>
> B) A good method for removing subjective elements from scientific findings is to detach one's own feelings or wishes from the process of scientific inquiry.
>
> C) Although intuition…play[s] an essential role in…scientific discovery, [it] should have no effect on the acceptance of scientific results….
>
> D) A high value is also placed on the individual scientist's curiosity and intellectual fascination with discovery and puzzle solving. (These traits are intimately connected with objectivity because ideally the only answers which scientists find pleasing are correct ones!)" (para. 12).

3. Ben-David (1991) defined scientism as a worldview that "claims to be derived from allegedly true scientific principles and which contains utopian promises for a dramatic improvement of the human condition" (p. 550).

4. "While science is without organization, it is without power," said Alexander Dallas Bache in 1851 (Bruce 1987, 217). "Inspired by elitist convictions," (Slotten, 1996, p. 40), Bache was one of the founders of American science, "an elite arbiter of scientific

practice...a major leader in the scientific community" through his political and social connections (p. 45). Bache was a graduate of West Point and a great grandson of Benjamin Franklin; a grandson, nephew and brother in law of secretaries of the U.S. Treasury; and a nephew of a Vice President. The aims of Bache and his colleagues were to establish legitimacy for science, "raise the status of scientists," increase financial support for science and organize scientists "under an elite leadership..." (Bruce, 1987, p. 219). Bache and his allies created the American Association for the Advancement of Science (AAAS), the National Academy of Sciences and a national network of research universities. By 1846 the United States had 32 scientific societies (Bruce, 1987, 36). The community of scientists in Bache's hometown of Boston, with Harvard in its neighborhood, became established as an elite intellectual community early in the 19th century. By the late 19th century, Boston had become an American intellectual capital and Harvard its heart (Greene, 1984, p. 61).

5. Gieryn's (1983, 1995, 1999) sensitizing concept of boundary-work is a key analytic tool in this study and is discussed in detail in Chapter 3.

Chapter 3

The Case of the Deviant Doctor:

theoretical foundation, methodological approach, analytic tools

People live their lives "by interpreting experience through the agency of culture," according to Christians and Carey (1989), and the aim of qualitative research, in their view, is to "interpret these interpretations so that we may better understand the meanings that people use to guide their activities" (p. 359). A qualitative approach to research enables interpretations and insights that standard analytical methods would exclude, Wynne (1991) noted, "especially [those] concerning the complexities of beliefs, understandings, and responses" (p. 113). "The language of everyday life...is lushly metaphorical, wildly contradictory, willfully connotative, and cynically strategic," as Pauly (1991) observed. Thus qualitative, interpretive communication research is a good way to explore a potentially rich mix of overt and covert meanings, connotations as well as denotations.

The aim of this case study is to provide some insights into the social construction of scientific authority by exploring, describing, and analyzing the symbolic actions of journalists and scientists as revealed by the texts chosen for analysis. Contextual studies such as this one provide "a point of entry to the real-world encounters within which

scientific knowledge is reconstructed to make it fit real situations in all of their rich complexity (or rejected if it cannot)," and understanding this process "is crucial to understanding the social authority...of science" (Wynne, 1991, p. 113). As a constructivist researcher interested in science, communication, and culture — science in communication and culture, science and communication in culture, science communication as culture — I have pursued this particular research project to better understand how scientific authority is constructed, how it works and what it does, and particularly what role journalists play in the process.

Theoretical foundation

Social constructivism is the post-positivistic theoretical foundation of this study. This foundation serves as a methodological approach to this analysis — a stance, a worldview guiding choices of specific tools of interpretation and analysis. Like its antecedent symbolic interactionism[1], the theoretical perspective of social constructivism establishes that people live in an empirical reality and construct their social reality in the empirical world. Berger and Luckmann (1966) explained the constructivist approach to studies of the social world: research situates the analyst and the actor on the same level, requiring researchers to acknowledge their interests, values and worldviews in exploring the interests, values and worldviews of others as they create social reality. This kind of research proceeds on the premises that social reality is contingent, contested, and continually under construction and that meanings are multiple and conflicting.

The constructivist perspective is well suited to observing the empirical world, conducive to interpretation, accommodating of multiple meanings (Pauly, 1991).[2] It challenges the idea that any single theoretical framework or research method is the only one that can improve understanding of social reality. As Calhoun (1995) observed, "Theories remain multiple not because we are confused but because all problems...can be seen in different ways" (p. 8). To study the social construction of reality, an analyst must explore the empirical world of everyday life, and the constructivist analyst should be able to alternate between and among the various frames of reference under examination (Berger, 1963, as cited in Collins & Yearley, 1992, p. 301).

As alluded to in Chapter 2, from a constructivist perspective communication is the primary means — arguably the sole means — of creating social reality. This study proceeds on the assumption that social reality is constructed primarily through the symbolic action of communication. It focuses on this action as it takes place in everyday life, represented in this case by the slice of life known as the mainstream mass media. This analysis aims to shed light on how actors construct, maintain, repair and demolish social reality by means of communication, using names and labels, categories and classifications, definitions and descriptions, to create (or erase) borders and boundaries. From a constructivist perspective, "no demarcation principles work universally," Gieryn (1995) noted; "the separation of science from other knowledge-producing activities is instead a contextually contingent and interests-driven pragmatic accomplishment drawing selectively on inconsistent and ambiguous attributes" (p. 393). Though researchers have explored a range of cases involving the social construction of science, it may not be

possible to explain completely and definitively how myriad groups of people with myriad sets of values and interests define the construct of science. But it is certainly possible, as many researchers have already done, to detail the ways in which different individuals and groups rhetorically define and deploy "science" in specific cases, and, perhaps, to find some commonalities among them.

Informing ideas and perspectives

While this study is informed by the critical theoretical perspective and work in critical studies, it is critical only in a broad, rather than a strict, sense. Simply by choosing a site of analysis, I am making a statement about its significance, identifying the construction of authority as a phenomenon that deserves critical attention. I am proceeding with this study on the assumption that as an analyst-critic, I am not detached from or disinterested in my analysis — or, as Christians and Carey (1989) put it, "that the knower is inextricably part of what is known" (p. 373). The critical theoretical perspective, as Calhoun (1995) described it, is "self-conscious about its historicity...and its engagement in the practical world" (p. 11). "Critical theorists are committed to the excavation of the political underpinnings of all modes of representation, including the scientific," Conquergood (1991, p. 179) observed, and in this study I am exploring the origins and nature of the power and authority of scientific representations. For the purposes of this study I have found it useful to consider the proposition that the aim of the critical stance — that is, critique — "is more than criticism," as Young (1995) said: the writer's aim is to submit the subject under study to "a searching evaluation of its framework of ideas, its assumptions, its terms of reference and especially its ideology...in a way which is quite

overt in juxtaposing its object with a set of values held by the person mounting the critique" (p. 1). A critical approach to the study of communication "challenges the naturalness of the social order," as Craig (1991) observed, "and questions the rational validity of all authority, tradition, and conventional belief" (subheading "The critical tradition," para. 6). The point of critical study of communication is to effect change through action. The critical perspective is thus useful to this study in providing ways to think about motives for symbolic actions and possibilities for raised awareness, and perhaps reconsideration of those motives.

This study is also informed by the cultural studies perspective. "Culture is not a power, something to which social events, behaviors, institutions, or processes can be causally attributed," as Geertz (1973) said; "it is a context, something within which they can be intelligibly — that is, thickly — described" (p. 14), and "cultural forms find articulation" (p. 17) through social action. In this case the social action is the symbolic action of communication. Critical and cultural studies have examined "how symbolic and institutional forms of culture and power are mutually entangled in constructing...the social world" (Giroux, 2004, p. 59). The transdisciplinary approach of cultural studies "provides a rationale for challenging how knowledge has been historically produced...and used within disciplines to sanction particular forms of authority and exclusion" (Giroux, 2004, p. 66). With its focus on subjectivity and constructedness, the cultural studies perspective is useful to consider in exploring the production of media texts in their cultural contexts (Harms & Dickens, 1996) and "the meanings, symbols and symbolic systems, ideologies, rituals, and conventions by which journalists maintain their cultural

authority as spokespeople for events in the public domain" (Zelizer, 2004, p. 101).[3] From this perspective journalistic practices and conventions are situated, and journalists are observers, interpreters and producers of culture who are in a position to pass judgment on social reality, "what is good and bad, moral and amoral, and appropriate and inappropriate" (p. 102). A constructivist framework for analysis informed by critical and cultural perspectives provides the flexibility to explore broadly and deeply, to see further into more corners of social reality.

Case study approach

The method employed in this project is case study, as reported in Chapter 1. Case studies aim "to make clear the complexities of the context and the ways these interact to form whatever it is that the case report portrays" (Lincoln & Guba, 1985, p. 214).[4] Research materials include a purposive sample of elite media texts and texts by John Mack, interviews with journalists, and other materials and information useful for contextualizing the case. (In accordance with Indiana University policy, I received approval for this project from IU's Bloomington Campus Committee for the Protection of Human Subjects on February 18, 1999; see Appendix A for documentation.) Textual analysis is a useful tool for this case study because it promises to reveal possibilities of meaning (Fursich & Lester, 1996). Analyzing texts (individually and collectively) should, "in addition to revealing something interesting and useful about the text itself...reveal something interesting and useful about the kind of symbolic activity that the text represents," as Dow asserted (1996, pp. 4-5).

Selection of texts for analysis

I selected texts for analysis in this study by purposive sampling, a technique suited to post-positivistic inquiry. The aim of such selective sampling is to "increase the scope or range of data exposed" (Lincoln & Guba, 1985, pp. 201-202) rather than eliminate deviant, extreme, or otherwise unusual cases. The investigator is responsible for defining the sampling process, and she can continually adjust the sample to build on data already collected (and the sample for this project was, indeed, continually adjusted and focused as this analysis proceeded). Texts published in elite media, journalists writing for elite media, and scientists affiliated with elite institutions are pace-setting, widely studied and credible subjects for analysis.

Texts selected for this analysis include reviews of Mack's book *Abduction*, news stories pegged to publication of the book, interviews with Mack, and other types of articles. Books and articles written by Mack about his abduction research — especially his book *Abduction* (Mack, 1994a), itself a subject of much of the media coverage explored in this study — were examined in depth. Selected texts also include some stories published in what I call fringe media (such as UFOlogy magazines), for purposes of comparison.

My initial search of the Lexis-Nexis news database for texts, conducted in September 1996, was bounded by the search terms "John E. Mack w/4 [within 4 words of] Harvard" and the dates January 1, 1992-December 31, 1995. This search yielded 187 stories from newspapers and magazines. (According to Lexis-Nexis, material in its database dates back to around February 1983.) I discarded a number of stories that cited Mack's

abduction research but were not substantively about Mack or his research. I used the same search terms for subsequent searches bounded by different dates (see Chapters 4 and 5).

The purposive sample that I selected from the body of texts I found through Lexis-Nexis and other modes of searching encompasses approximately 75 texts. (I say "approximately" because, with regard to a few texts, it is difficult to draw hard boundaries between texts treated as subjects for analysis and texts used simply for context or details.) These 75 texts include 39 daily newspaper stories, 7 weekly magazine articles, 6 monthly magazine articles, 10 scientific journal articles (nine published in *Psychological Inquiry*, including one coauthored by Mack; and 1 published in the *Journal of the American Psychoanalytic Association*), 4 books (three by Mack, counting the hardcover and paperback editions of *Abduction* as separate books; plus one popular science book by Carl Sagan), 3 miscellaneous papers by Mack (not including the one he coauthored for *Psychological Inquiry*), and a few miscellaneous online articles. The 39 daily newspaper texts include 2 letters to the editor, 2 wire service stories (counted only as single texts though they were published in multiple media outlets), 3 Sunday-magazine features, and 1 book excerpt plus news briefs, news features, and book reviews. Virtually all of the daily newspaper articles in my sample were published in the top 100 U.S. daily newspapers, by circulation, as identified by the Audit Bureau of Circulations.[5] Given the focus of this study on elite media, my purposive sample focuses on elite media, and most of the 39 newspaper articles (save two or three) were published in the top 20 newspapers. All texts selected for analysis are identified as such in my

references. I have cited additional media texts and popular books in this study for the purpose of providing context; these texts are listed in references but not marked as texts selected for analysis, as they were not included in my purposive sample.

I have paid special attention in this analysis to a core group of texts, including three books by Mack (1994a, 1995, 2000a) and seven stories that published in a select group of mainstream, elite print media: Gleick, 1994, *The New Republic*; Kahn, 1994, the *Boston Globe*; Miles, 1994, *the Boston Globe*; Neimark, 1994, *Psychology Today*; Rae, 1994, *The New York Times Magazine*; Schorow, 1994, the *Boston Herald* (the *Herald* does not qualify as "elite" but this story is included because of the "local" connection); and Tery, 1992, the *Boston Globe* Sunday magazine.

Elite media are worth singling out in the study of science communication not only because of their "widespread national circulation and…influence on other media" as trendsetters but also because they "cater to a substantially well educated audience, including many scientists, with more than an average interest in scientific policy making" (Fursich & Lester, 1996, p. 28). Science stories in these elite media "serve as a point of reference…for journalists' reporting for other media outlets" (Nelkin, 1995b, p. 8).

Another reason for my choice of core sample is that these articles refer to each other. All together, the individual texts in my sample constitute a sort of "metatext" or metanarrative (Lyotard, 1984), in this case a text made up of texts, an overarching story (or a story about a story). These texts are not simply replications of the same story for

different publications. The texts are related; each text implicitly or explicitly is linked with previous texts, recapping past events, recycling expert sources, adding new information, and reflecting new perspectives. For their constructivist study of controversial science in the media, Hagendijk and Meeus (1993) defined metanarrative as "the texts that make up the textual corpus of the controversy" (p. 391). A scientific controversy "is a developing corpus of texts" (p. 394), and the metanarrative of a scientific controversy is the product of "the ways in which texts refer to other texts in establishing facts, identifies of actors and accounts" (p. 391).

In addition to collecting and analyzing texts, I conducted interviews with journalists who wrote stories about Mack's abduction research, and with Mack himself. These interviews were intended to be exploratory discussions, providing subjects the opportunity to share their experiences and perceptions relating to the case and supplied material for fleshing out the contexts within which selected texts were created. (See Appendices A and B for interview questions and interview subjects.) I reviewed transcripts and videotapes of many hours of broadcast media coverage of Mack's abduction research during research for this project. However, the coupling of words and images creates a different sort of text, and different sorts of meanings, than words alone in print texts. Thus, because of this study's focus on words, I did not examine broadcast "texts" in this analysis or compare them with print texts. In addition, I did not consider photographs and illustrations included in print media stories selected for analysis. While I reviewed some non-U.S., English-language texts in the course of research for this project, my analysis focuses on texts published in U.S. media and forgoes intercultural comparisons. Finally,

evaluation of the legitimacy or reality of the so-called abduction phenomenon in general or Mack's abduction research in particular is beyond the scope of this study.

Boundary-work: a key sensitizing concept

As explained in Chapter 1, this study has proceeded on the assumptions that: science is a social construction created by scientists and others through the symbolic action of communication; science has cultural authority (a quality created by scientists and others in the process of constructing science); journalists play a role in the construction of scientific authority; and rhetoric is a primary tool in this construction, which takes place, as Gieryn (1983, 1995, 1999) has observed, in specific cultural contexts. While some aspects of culture may endure over time, cultural contexts are constantly changing. This mutable quality of social reality, Bourdieu (1989) observed, "provides a basis for the plurality of visions of the world which is itself linked to the plurality of points of views" that serves as a foundation "for symbolic struggles over the power to produce and to impose the legitimate vision of the world" (p. 20). To ask "What is science?" is to inquire about demarcation, to consider what sets science apart from other practices (Woolgar, 1988). From the constructivist perspective guiding this analysis, science appears to be not an immutable social structure but a contextual and contingent cultural phenomenon. What science (and scientific authority, and science news, as well) is depends on where and when it is, and who is involved in defining it.

A question worth addressing, according to Gieryn (1983), is, "How do scientists construct ideologies with style and content well suited to the advancement or protection

of their professional authority?" (p. 783). Researchers interested in studying science in society "must eschew the essentialist presumption of a priori, transcontextual definitions of *science, scientist,* and *scientific knowledge*" (Gieryn & Figert, 1990. p. 69). The best way to study the social construction of science, scientists, scientific knowledge, and scientific authority is 'to listen and watch as science gets built" (p. 69). Sensitizing concepts are useful tools for qualitative study (Christians & Carey, 1989), and this study employs Gieryn's (1999, 1995, 1983) sensitizing concept of boundary-work as a guide in exploring "when, how and to what ends the boundaries of science are drawn and defended in natural settings often distant from laboratories and professional journals" (Gieryn, 1995, pp. 393-394).

Boundary-work, according to Gieryn, is the attribution by scientists (and others) "of selected characteristics to the institution of science" (1983, p. 782). It is "strategic practical action" (1999, p. 23), cultural cartography, the location of science in space and time. Boundary-work takes place in the "pursuit of a monopoly over cultural authority through exclusion of those offering discrepant and competitive maps of the place of science in the intellectual landscape" (1995, p. 394). What ends up inside or outside the boundaries of science "is a local and episodic accomplishment, a consequence of rhetorical games of inclusion and exclusion" (p. 406). The study of boundary-work is thus a good way to explore how conventional and unconventional scientific worldviews are constructed.[6] Boundary-work "describes an ideological style found in scientists' attempts to create a public image for science by contrasting it favorably to non-scientific intellectual...activities" (Gieryn, 1983, p. 781), and "descriptions of science as

distinctively truthful, objective or rational may best be analyzed as ideologies: incomplete and ambiguous images of science nevertheless useful for scientists' pursuit of authority" (pp. 792-793). If ideology is employed to resolve disagreements and advance interests (Geertz, 1973, as cited in Gieryn, 1983), then researchers would do well to "examine the *rhetorical style* of ideological statements" (Gieryn, 1983, p. 782).

Rhetorical strategies, then, are tools for doing boundary-work, and rhetorical analysis should prove to be a useful tool for examining the enactment of boundary-work. "The qualities, practices, and accomplishments attributed to science are explicable as rhetorical tools used by those whose practical ends and interests are served by making these attributions" (Gieryn & Figert, 1990, p. 90). Tools for doing boundary-work include, for instance, the ideology of scientism, deployed by scientists to demarcate legitimate scientific knowledge from other kinds of knowledge (Gieryn, 1995). The mass media, among other forums, provide "ripe spots for picking juicy episodes of cultural cartography" (Gieryn, 1999, p. 24). The boundaries of science can be maintained by actors who are perceived by legitimate scientists to be inside and outside the boundaries. Journalists, for example, can do boundary-work. When journalists "use science to attach credibility to their stories, they are also reproducing the cultural meaning of scientists as the fount of authoritative knowledge about nature" (Gieryn & Figert, 1990, p. 91).

Analytic tools: exploring boundary-work by rhetorical analysis

Foucault's and Bourdieu's examinations of the creation, distribution and exercise of power in specific cultural contexts are reviewed here briefly as they inform this study.

Boundaries are important to what Foucault called the archeology of knowledge. Foucault (1980, 1977, 1972) explored how power is constructed in everyday discourse, how power and authority arise out of this discourse, everywhere, from the top down and the bottom up. "It is not possible for power to be exercised without knowledge," he wrote (Foucault, 1977); it is impossible for knowledge not to engender power" (p. 52). Knowledge is power, and power is knowledge, and by studying their construction in discourse one can "capture the process by which knowledge functions as a form of power and disseminates the effects of power" (Foucault, 1980, p. 69). According to Foucault (1980), it is useful to study the relationship between power and knowledge because "the exercise of power itself creates and causes to emerge new objects of knowledge and accumulates new bodies of information" (p. 51), and knowledge "induces effects of power" (p. 52). Discursive practices are not simply ways of producing discourses, Foucault (1977) observed; they define "a legitimate perspective for the agent of knowledge, and the fixing of norms for the elaboration of concepts and theories" (p. 199). Such practices are tools of boundary-work, as it were, and I explore them as a means for constructing scientific authority in this case.

Bourdieu (1991) considered how naming and labeling create social reality and the power and authority that operate in that reality. "Symbolic power is the power to make things with words," Bourdieu (1989, p. 23) asserted, and thus the words used to construct social reality "are the stake par excellence of political struggle" (p. 21). For the purposes of this study, words are *the* means of making meaning. This study explores language, discourse, and rhetoric as means of articulating — that is, stating *and* constructing — the boundaries

of science, by strategies that affirm or challenge elements of the positivistic scientific worldview. It explores rhetorical strategies as ways of constructing the boundaries of social reality — in this case, specifically scientific authority.

Geertz (1973) characterized human behavior as "symbolic action" (p. 10). Burke (1984, 1973) examined the symbolic action of communication in the context of culture. Carey (1992) described the works of Burke and Geertz as sources of "fresh perspective on communication" (p. 23). Carey's (1992) conception of communication as ritual enacted to maintain culture over time provides a model of communication as "dramatic action" (p. 21). By this model, news reporting is a ritual, and "news is not information but drama...a presentation of reality that gives life an overall form, order, and tone" (p. 21). Thus social reality is produced by communication, "the construction, apprehension, and utilization of symbolic forms" (p. 25). "To study communication is to examine the actual social process wherein significant symbolic forms are created, apprehended, and used," according to Carey, to observe and analyze "attempts to construct, maintain, repair and transform reality" (p. 30).

Dramatistic criticism

Rhetoric, in Burke's (1969b) view, is "an essential function of language…the use of language as a symbolic means of inducing cooperation in beings that by nature respond to symbols" (p. 43). For Burke (1973), the symbolic action of communication is the way that people make meaning, the means of creating and maintaining subjective, social reality, "the dancing of an attitude" (p, 9) toward that reality. This study employs Burke's

(1969a, 1969b, 1973, 1984) dramatistic criticism as a primary tool of rhetorical analysis, to explore in depth the rhetorical strategies deployed in texts selected for analysis. Dramatistic criticism, with its emphasis on accommodating multiple perspectives, exploring ambiguity and complexity, and expanding frames of reasoning, is well suited to exploring the rhetorical strategies that journalists employ in constructing scientific authority. "A critic eager to define [her] position should explain...what to look for, and why; [and] how, and when and where," Burke wrote (1973, p. 68). What I looked for in this case was boundary-work by journalists, rhetorical evidence of their participation in the construction of scientific authority, the exercise of their cultural authority to define what and who counts in the world of legitimate science. I conducted this search by means of close reading of a collection of related texts, focusing on a core of elite media texts, from the theoretical perspective of constructivism. I have used a variety of Burkean tools herein to excavate for motives, as he suggested, to consider how and why various strategies are conceived and employed and to speculate on possible alternative strategies that might be more productive.

In Burke's view, just as social structure is functional, so is textual structure, and the focus of rhetorical analysis must be on the structure of the text. "The motivation out of which [one] writes," according to Burke (1973), "is synonymous with the structural way in which he puts events and values together" (p. 20). A writer may be "conscious of selecting a certain kind of imagery to reinforce a certain kind of mood" but "cannot possibly be conscious of the interrelationships among all these equations" (p. 20). An analyst, however, may be able to find these patterns by examining the completed text.

Such an analysis aims to identify the rhetorical strategy employed in a text, the purpose of the symbolic action in it, "the *functions* which the structure serves" (p. 101).

Using the tools of dramatistic criticism, such as Burke's pentad of relational terms — scene, act, actor, agent, purpose — I have attempted in this study to identify the basic rhetorical equation of a typical Mack-abduction story and tease out the terministic screens and associational clusters of word-symbols that writers have used to construct their texts. This analysis considers the context of the text as well. "The main ideal of criticism," Burke (1973) wrote, "is to use all there is to use" (p. 23), and the critic/analyst may wish to consider information about the author of a text and the time and place in which the author produced the text, for example. I have tried to use all that I could find to use for this analysis.

Writers build structures with words, words represent motives, and by examining these screens and clusters an analyst can explore a writer's motives, and work out "what kinds of acts and images and personalities and situations" (Burke, 1973, p. 20**)** go with a writer's notions of themes explored in a text. What Burke (1973) called terministic screens are rhetorical frames of power, act, and order that highlight some aspects of a text and downplay others. They are frames by which rhetors choose one way of description by not choosing another way, groups of words employed to filter stories and direct audiences toward certain observations and interpretations and away from others. They affect the scope and circumference of a text, determining what goes into it and what does not. By examining terministic screens, an analyst can consider what meanings terms take on in

the structure of a particular text. What Burke (1973) called associational clusters are repeated relations of terms, "implicit equations" that an analyst can study to determine "what goes with what," what is opposed to what, what is linked to what — "what kinds of acts and images and personalities and situations" (p. 20) for example, go with ideas addressed in a text.

An analyst may employ what Burke (1973) called "perspective by incongruity" (p. 400) as an approach to analysis. Burke described perspective by incongruity as "a rational prodding or coaching of language so as to see around the corner of everyday usage…a kind of metaphorical projection" (pp. 400-401) beyond common meanings of terms that can enable consideration of new meaning(s). Terministic screens are structured to direct audiences toward certain meanings and away from others, and perspective by incongruity offers a way of transcending such screens by enabling consideration of other meanings. Rhetorical transcendence — in Burke's conception, a symbolic bridging or merging, a way of getting past the either-or options of acceptance or rejection — can be upward or downward (the strategies of debunking and polemic are examples of downward transcendence). Burke's (1984) concepts of victimage ritual — a negative rhetorical strategy, a frame of rejection — and comic corrective — a positive rhetorical strategy, a frame of acceptance — offer ways of comparing and contrasting either-or and both-and rhetorical strategies (that is, frames of rejection and frames of acceptance).[7]

Framing and deconstruction

The concepts of framing and deconstruction, broadly drawn, have informed this analysis as they are relevant to dramatistic criticism. Because I am analyzing texts, my conception of framing in this case study is the rhetorical structuring of a text, by foregrounding and backgrounding, including and excluding, rhetorically creating some sort of boundary to distinguish "inside" from "outside." (A psychologist might call it cognitive framing. A sociologist might call it interactional framing. These different conceptions of framing are not necessarily exclusive.) My conception of Derrida's (1997) attitude of deconstruction is to take nothing for granted, question assumptions, and attempt to consider all possible meanings; an attitude of deconstruction is in keeping with the postpositivistic stance of this analysis. I have used the ideas of framing and deconstruction as supplementary sensitizing concepts, as it were, in examining rhetorical strategies herein.

Gieryn's (1983, 1995, 1999) boundaries and Goffman's (1974) frames are complementary concepts, constructions used to organize meaning. Goffman's social frameworks are schemata of interpretation. A group's "framework of frameworks" (p. 336) functions as its worldview, and specialists such as scientists are the tenders of worldviews and the referees of frame disputes. "Individuals exhibit considerable resistance to changing their framework of frameworks," according to Goffman (pp. 28-30). Rhetorical framing is a means of doing boundary-work. In mass communication research, frames have been explored as functional structures (Entman, 1991; Gamson & Modigliani, 1989; Ghanem, 1997; Pan & Kosicki, 1993), ideological processes (Carragee & Roefs, 2004; Durham, 1998), and particular constructions of social reality (Scheufele,

1999). As Gitlin (1980) asserted, "any analytic approach to journalism must ask: what is the frame here? Why this frame and not another?.... Where do news frames come from? How are they fixed into the appearance of the stable, the natural, the taken-for-granted? And how, despite this, are the prevailing frames disputed and changed?" (p. 7).[8] While I have considered the literature on journalistic framing in conducting this study, I find the typical conception of frames employed in journalistic frame analysis rather rigid for application to this study. My thinking in this analysis is more influenced by the broader concept of framing as articulated by Goffman (1974) and, even more broadly, by Burke (1984).[9, 10]

Productive criticism

This analysis also draws on the principles of critical rhetoric and productive criticism as they may usefully augment dramatistic criticism. In critical rhetoric, critique is "a transformative practice rather than...a method" (McKerrow, 1989, p. 91), an orientation rather than a methodology. The aim of critical rhetoric is "to unmask...the discourse of power" and "understand the integration of power/knowledge in society" (p. 102). Critical rhetorical analysis examines the rules of discourse that establish who may speak about what, and when and where and how, and how these rules are "used by the dominant class to control the discursive actions of the dominated" (p. 93). This sort of analysis requires understanding and pursuing one's own interests and writing to and for an audience, and this self-reflexive process is the means of critical invention. This sort of criticism is both served and confined by theory and method, with theoretical foundation and methodological approach guiding exploration and also constraining the scope of analysis.

And it rarely proceeds in a linear fashion (Nothstine et al, 1994). In critical rhetoric, "texts are understood to be larger than the apparently finished discourse"; critics should "look for *formations of texts* rather than '*the* text' as a place to begin analysis" (McGee, 1990, p. 287). In attempting to construct a metatext, as it were, it may be useful to consider "structural relationships, between an apparently finished discourse and its sources, between an apparently finished discourse and its culture, and between an apparently finished discourse and its influences" (p. xx).

What Klumpp and Hollihan (1989) have described as "socially and morally involved criticism" (p. 84) aims at "exposing the strategies through which rhetoric transforms the material events of the world into sociopolitical power" (p. 90). Criticism is itself "a rhetorical act" (p. 94), an act of invention, and the socially and morally involved critic focuses on "rhetoric converting the material world into support for the social order" (p. 91). According to Ivie (2001), "As a perspective on symbolic action, rhetoric is a productive rather than a reductive theory" (para. 2). An analyst engaging in productive criticism takes social action simply by doing criticism, deciding that a particular topic, and one's own assessment of it, is worthy of consideration (Ivie, 2001; Nothstine, et al, 1994). Productive criticism should be socially useful, provoking audiences to think or act in different and socially responsible ways (Nothstine, Blair, & Copeland, 1994). This analysis is intended to be productive and socially useful, to enhance human relations, especially relations between journalists and scientists.

Conclusion

The next two chapters tell the story of Mack's abduction research, constructed in Mack's texts and in journalists' coverage of him and his work.

Notes

1. Blumer (1969) offered symbolic interactionism as an empirical social scientific perspective for exploring the sources and uses of meaning in social life. In Blumer's view, symbolic interactionism can serve as a theoretical framework and a methodological approach for observing and interpreting social interaction in the empirical world.
2. Pauly (1991) has acknowledged that his approach to qualitative research is "heavily influenced by...symbolic interactionism, and by a variety of idiosyncratic individual interpreters, such as Kenneth Burke" (p. 15).
3. Zelizer (2004) has explained how the so-called Illinois school of cultural studies, led by Carey, "positioned the news media as conveyors of experience and shapers of broadly defined cultural systems...journalism emerged as a key strain of resonance for thinking about how culture worked" (p. 105).
4. I considered a number of case studies as models in planning this study. Studies by Gitlin and Koestler were especially useful. In his study of "the nature, sources, and consequences of news," documented in *The Whole World is Watching* (1980), Gitlin employed frame analysis in examining how the journalistic practices and ideology affected media content. Gitlin approached his study as a constructivist, asserting that the media orchestrate everyday consciousness and participate maintaining cultural hegemony. Gitlin concluded that contemporary political movements depend on the mass media to establish and maintain cultural authority. In my case study I will explore the possibility that scientists and

journalists may depend on each other to maintain their own cultural authority. Koestler's case study of the scientific establishment's rejection of controversial work done by a prominent scientist, documented in *The Case of the Midwife Toad (*Random House, 1971), offers a good model for my study. As John Mack did, Koestler's subject Paul Kammerer wrote and lectured for non-scientists as well as scientists; his colleagues in science criticized him for communicating with the public just as Mack's colleagues have criticized him for his popular writings and lectures. Kammerer advocated a lamarckian conception of evolution in an ongoing dispute between darwinists and lamarckians evoking "intense emotional and philosophical passions," according to Koestler. I observed a similar intensity in discussions about Mack's work. Like Mack, Kammerer did not start his career doing controversial research but stumbled into it by chance after he had made his reputation. As in Mack's case, Kammerer's personal practices and beliefs were "abnormal" enough to bother his colleagues in science. In both cases, elite establishment scientists ultimately accused the controversial researchers of shoddy, even fraudulent, scientific practices. Koestler reconstructed in great detail the personal and professional life of the subject of his case study as well as the scientific and broader cultural milieu in which Kammerer lived and worked. He drew on Kammerer's personal and professional records, scientific literature, popular media, and interviews with family and friends and colleagues of the subject to flesh out his case.

5. Information on reported circulations of daily newspapers was obtained from the Audit Bureau of Circulations. Retrieved April 28, 2005, from http://www.accessabc.com/reader/top100.htm.
6. At least one study (Winch, 1997) has employed the concept of boundary-work to the examination of the social construction of the boundaries of journalism. Its focus was on the demarcation of journalism from entertainment. This analysis considered the cultural boundaries of journalism but focused on the role that journalists play in constructing the cultural boundaries of science. What was at stake in this boundary-work was journalism's "authority, jurisdiction, and autonomy" (p. 1). "The perceived credibility and objectivity of their work" (p. 9) played an important role in this boundary-work. This study showed that boundary-work in journalism "is done primarily by insiders — those who have the most to lose through the loss of jurisdiction and autonomy" (p. 155). Journalists were found to construct a conception of journalism that enhanced "their power and prestige" (p. 9). "Much like the boundary-work rhetoric of scientists," journalistic boundary-work tended to distinguish journalism from other domains in dualistic terms "such as professional versus amateur, responsible versus irresponsible, ethical versus unethical, legitimate versus pseudo" (p. 155).
7. "Epic, tragedy, and comedy gravitate towards the positive side, while elegy, satire, and burlesque stress the negative," according to Burke (1984, p. 57). He distinguishes humor, a strategy of downward transcendence (ridicule, rejection), from comedy, a strategy of upward transcendence (identification, acceptance).
8. Some relevant findings in the literature on frame analysis are that:

• Frame analysis should address which words in a text are part of the frame and which are not (Entman, 1991).

• Framing involves choice of topic, presentation of information, and cognitive attributes and affective attributes (Ghanem, 1997).

• Journalistic frames can be characteristics of a text or internalized guides (Entman, 1991).

• Standard structural features such as headlines, decks, leads, subheadings, callouts, closes, and photos and captions are among the mechanisms of journalistic framing (Gamson & Modigliani, 1989; Ghanem, 1997).

• Comparing journalistic frames can "reveal the critical textual choices that framed the story but would otherwise remain submerged in an undifferentiated text" (Entman 1991, p. 6).

• Rhetorical framing is a way in which journalists make meaning in their stories. Attributions to expert and official sources are a framing strategy employed to comply with the convention of objectivity. Keywords, metaphors, concepts, and symbols are important elements of media frames, too, and "sizing" — playing up or playing down various elements of a particular construction of reality — plays a role, too (Entman, 1991).

• As an ideological process, framing establishes a "right" conception of reality; reporter-source relations are the site where the framing takes place, and framing research should address how and why frames are constructed as modes of making meaning (Durham, 1998).

• "The reduction of frames to story topics, attributes, or issue positions ignores the ways in which frames construct particular meanings and…advance specific ways of seeing issues" (Carragee & Roefs, 2004, p. 218), and "the relationship between media frames and broader issues of political and social power" (p. 214) warrants exploration.

9. "The comic frame," Burke (1984) wrote, "in making a man the student of himself, makes it possible for him to 'transcend' occasions when he has been tricked or cheated, since he can readily put such discouragements in his 'assets' column, under the head of 'experience.' Thus we 'win' by subtly changing the rules of the game" (p. 171), by making assets out of liabilities. (In addition to the comic frame, the epic and tragic frames are frames of acceptance as well.)
10. Analysis of terministic screens may enable the analyst to address a criticism of frame analysis as it has been applied in many media content studies. According to F. D. Durham (1998), "the functionalist literature on framing" (p. 102) does not adequately address the role of framing as a social process. These analyses have tended to describe the frames that journalists employ without considering how and why journalists construct and deploy particular frames or assessing the motive and purpose of frames and framing, Durham claimed (see N. 8, above). Frame analysis should consider framing as "an ideological process" and "reporter-source relations as the site of the framing effort," toward revealing "how and why framing happens as a fundamental social process of meaning making" (pp. 100-101).

Chapter 4

The Case of the Deviant Doctor: a drama in three acts

The alien abduction phenomenon has been called a "hysterical syndrome of the 1990s," (Showalter, 1997, p. 203). John Mack called abduction a "phenomenon" existing "at the margins of accepted reality" (1994a, preface), and he made it his subject of study in the 1990s. Journalists reporting on this work raised questions about its status as legitimate scientific research and Mack's status as a scientific authority.

Mack unquestionably qualified as an expert and an authority in his field. He considered himself a clinician and a scientist and carried the proper credentials.[1] He graduated from Oberlin College (Phi Beta Kappa) in 1951 and obtained his M.D. from Harvard Medical School in 1955. He completed his medical residency at Boston's Massachusetts Mental Health Center and then joined the U.S. Air Force, completing a two-year tour of duty in Japan working as a psychiatrist. He graduated from the Boston Psychoanalytic Society and Institute in 1967 and obtained certification as a child analyst in 1969. He then created a psychiatry unit at Cambridge Hospital, heading the unit until 1977. In 1972 he joined the faculty of Harvard Medical School, and from 1973 through 1977 he chaired the school's department of psychiatry.

In 1977 Mack won a Pulitzer Prize for *A Prince of Our Disorder*, his 1976 psychobiography of T.E. Lawrence.[2] Other books authored, coauthored, or edited by Mack include: *Nightmares and Human Conflict* (1970), *Borderline States in Psychiatry* (1975), *Development and Sustenance of Self-Esteem in Childhood* (1983*),* and *Alchemy of Survival: One Woman's Journey* (1988). Mack wrote numerous articles as well, on subjects ranging from psychoanalysis and biography to nationalism and the self, addiction, and "power, powerlessness and empowerment in psychotherapy," publishing in scientific journals ranging from the *American Journal of Psychiatry* and *Journal of the American Psychoanalytic Association* to *The Psychohistory Review*.

Through the 1970s and 1980s Mack participated in a wide variety of professional groups ranging from the American Psychiatric Association (APA) and the International Society for Political Psychology to the American Association of Chairmen of Departments of Psychiatry and Physicians for Social Responsibility. Through the 1970s he was active in the APA, his discipline's official boundary-tending organization.[3] Mack served on APA's Task Force on Psychohistory and Psychobiography from 1973-1975 and its Task Force on Psychiatry and Foreign Affairs from 1975-1977. In 1977, he also participated in APA's Task Force on Psychosocial Impacts of Nuclear Advances and its Committee on Psychiatry and Foreign Affairs. Through the 1980s he held leadership positions at Harvard Medical School and Cambridge Hospital and founded what came to be known as the Center for Psychology and Social Change, a research organization dedicated to "the science of human experience." In 1983 he testified to the U.S. House of Representatives on the psychological impact of the nuclear arms race on children. In 1985 he coauthored

an op-ed for *The New York Times* on the psychological effects of nuclear weapons buildup (Coles & Mack, 1985). In 1988 he won the American Association for Suicidology's Louis Dublin Award for his contributions to that field.

Born in 1929, Mack grew up in what he described as "a secular American family of German Jewish heritage" (Mack, 2000a, p. 4). In attempting to explain the origin and evolution of his scientific and spiritual worldviews, he wrote:

> The idea of a great bearded figure suspended somehow in the heavens was the only representation of God I remember being taught, and my logical rational mind rejected this notion as impossible and absurd. Spirituality was a vaguely pleasant but unrealistic concept. My father, a professor of English at New York's City College, read the Bible to my sister and me as culture and literature. In medical school any thought that the complex life-forms we were studying were created by purpose or intelligent design rather than simply through Darwinian selection was disparagingly labeled 'teleology,' a kind of academic expletive. The experiences of native peoples with spirits, and the religious beliefs of the faithful, I looked upon, with Freud…as animism, primitivism, and illusion. Psychoanalysis and psychiatry, while expressly addressing the inner life, at the same time fit well into my materialist worldview, offering mechanistic explanations for human behavior, feelings, and experiences (Mack, 2000a, p. 4).

In the early 1980s, according to *New Age Journal* (Lawler, 2001), Mack began to explore "the realm of spiritual questing and the world of political activism," in response to "the urging of his children" (para. 9). Mack's "entire family was arrested in 1986 at the government's Nevada Test Site for protesting underground nuclear detonations" (para. 9).

On January 10, 1990, shortly after his 60th birthday, Mack came upon a new mystery he decided he wanted to explore. Through a mutual acquaintance, he met Budd Hopkins, a self-described artist who worked with people who believed they had been abducted by

aliens. Mack would later claim he thought at the time that Hopkins must have been crazy and that alleged abductees must have been suffering from some other more familiar sort of trauma (Mack, 1994a). But the Harvard psychiatrist became intrigued by what he came to call the abduction phenomenon, and he began working with abductees and studying abduction in the spring of that year. In 1993, Mack established a Program for Extraordinary Experience Research (PEER) as a research and education project of the Center for Psychology and Social Change.[4] "Research into extraordinary experiences is a developing science," PEER said about its work. "The discipline of science enables us to examine the material that emerges. Through open discussion of data collected from across methodologies and disciplines, human knowledge moves forward" (What is PEER?, 1996, p. 4).

In "The Case of the Deviant Doctor," the drama to be described herein, Mack first appeared on stage as a scientific authority, an expert, with decades of experience in the study of trauma and identity, and a lifelong tendency to nudge the boundaries of convention. Act I of this drama opened with the 1992 MIT abduction conference, providing exposition of Mack and of abduction. The conference, and the attendant beginnings of media scrutiny of Mack's new line of research, served as a point of attack in this drama, the beginning of a series of complications and conflicts that ultimately should lead to a climax. Act II depicted the publication of *Abduction* and the action that followed: criticism, media frenzy, the doctor's response, and the Harvard Medical School investigation.

The third and final act of a typical drama supplies a climax, and audiences might have expected that the complications and conflicts in this particular drama would lead to either Mack's excommunication from the Harvard community or the scientific community or both, or a discovery that would vindicate his claims. But Act III in this play was anticlimactic, the denouement unfinished. After the Medical School's investigation of his research, Mack maintained a relatively low public profile. He continued to serve as an expert and authority, for audiences ranging from readers of *The New York Times* (Mack, 2000b) to communities on the fringes of scientific legitimacy (Mack, 1996b). In 2000, he published a second book on his abduction research (Mack, 2000a), and in 2003 he concluded his 10-year PEER program of abduction research. His research project concluded, Mack continued to speak about abduction but also worked on other things (see Act III, below). Still a tenured professor at Harvard, still a recognized authority, still a sought-after speaker, Mack appeared to have survived the conflict over his research with his credibility and authority at least in part intact. Observers were left to wonder whether the mystery of abduction would ever be solved, at least by this particular expert.

What follows in this chapter is a documentation of this drama, drawing primarily on Mack's texts and also citing supporting materials.

Act I, "The doctor is an expert": expertise, authority, deviance

In the years before he began his abduction research, Mack's communications about his work took place comfortably within the conventional boundaries of science. He began his career with a helping of "instant credibility" in the form of his Harvard degree, soon

adding a Harvard professorship to his plate. His 1977 Pulitzer completed a sort of iron triangle of credibility that would prove durable when he came under fire in the ‘90s.

Mack’s 1970 book on nightmares foreshadowed what would become his lifelong interest in consciousness, trauma, identity, and the boundaries between objective and subjective (external and internal) reality, interests that eventually would lead him to the study of abduction. “If we demonstrate the sexual significance of a nightmare,” he wrote, “we are still faced with the more fundamental task of explaining why such sexuality should be overwhelming, terrifying, and associated with violence, crushing and destruction” (Mack, 1970, p. 3). Looking at the recorded history of nightmares, “one is struck,” he continued, “by the objective reality people of earlier centuries attributed to these visions” (p. 9). Nightmares, he observed, reflect the human “struggle to integrate internal and external realities” (p. 11).

Through the 1970s, ‘80s, and early ‘90s Mack published in peer-reviewed journals and participated in professional societies. In the ‘80s he established a research center (the Center for Psychological Studies in the Nuclear Age, later renamed the Center for Psychology and Social Change) through which he could pursue his interest in social issues of psychological importance. He spoke and wrote as an expert and authority for scientific audiences (e.g. Mack, 1983; Mack, 1986; Mack, 1988; Mack, 1992c) and, on occasion, general audiences (e.g. Mack, 1991). Journalists who used Mack as a source cited him as a Harvard authority in stories relating to his area of expertise, the

psychological effects of trauma and conflict (e.g. Bower, 1985; Bruckner, 1985; Hand, 1988).

Though Mack did not speak or write about abduction in the mainstream media before his first book on abduction came out, he did write about abduction in articles published by his Center for Psychology and Social Change (Mack, 1992b) and the Institute for Noetic Sciences (Mack, 1992a), an organization dedicated to consciousness studies. In one of those articles (Mack, 1992b) he linked his interest in abduction to what he called the politics of ontology. "We" — presumably scientists and scientifically minded people — "having internalized the assumptions and ways of knowing of scientific and philosophical materialism and dualism" (p. 5), cannot accept the possibility of a nonmaterial reality, he wrote, as it conflicts with the conventional Western scientific worldview. Resistance to the idea that abduction might somehow be real, Mack argued, was more political than scientific, relating to what scientists believe, and allow others to believe, is real:

> We rarely stop to think that what we have come to accept as real may be determined by individuals and groups whose point of view *in a culture at a given time* [emphasis in original] is seen as authoritative, or who have the power to impose upon the rest of the society their methods and criteria for perceiving and defining reality (p. 5).

In the other article (Mack, 1992a) Mack wrote, "The fact that a phenomenon defies conventional explanation, or even challenges our notions of reality, should not permit us to ignore its existence or prevent us from exploring [it]" (p. 5).

In June 1992, with MIT physics professor David Pritchard, Mack cochaired a conference at MIT on abduction research. In a paper prepared for presentation to the conference,

Mack (1994c) addressed "why the abduction phenomenon [could] not be explained psychiatrically" (p. 372). He asserted that abduction was not a psychiatric syndrome but something that "lies outside the range of realities that are possible in the Western world view, and what is mental illness but thinking and behavior that do not fit that which we have become accustomed to including within the boundaries of accepted reality?" (p. 372). Explanations proposed by others for reported abduction experiences — hallucinations, delusions, dreams, hysteria — do not "consider, let alone account for, several fundamental elements of the abduction experience" (p. 372), he said, including the consistency of reported experiences and a lack of psychopathology in experiencers. Citing Carl Jung's musing on "flying saucers, written long before abductions were being widely reported," Mack suggested considering Jung's idea of "the UFO/abduction phenomenon as a kind of contemporary myth, a structure of belief manifesting throughout the culture at a given time," some evidence of:

> Resonance between the psyche or inner world and physical phenomena in the outside world…. If we were to stretch the notion of the collective unconscious to this degree then the distinction between internal and external, psyche and reality, would be lost. World and psyche or consciousness become one (p. 374).

"No psychiatric diagnosis applies usefully to these cases," he concluded.

> We are left then with a profound and important mystery.... Some sort of intelligence seems to have entered our world, as if from another dimension of reality…. All we can do is try to learn more about the abduction phenomenon and have the courage to look at it honestly, resisting the natural impulse to try to force it into familiar categories (p. 374).

Mack would consistently reassert these claims over the next decade in constructing abduction as a problem worthy of scientific study, and himself as a scientist with the appropriate credentials to tackle the problem.

Act II, "The doctor steps out on a limb" — lighting and fighting firestorms

Scene I, The book and reaction to it

In its press release[5] announcing the April 20 issuance of *Abduction,* publisher Scribner's billed Mack as a "Pulitzer prize-winning author...noted Harvard professor...scientist, researcher" and asserted that "when a Harvard psychiatrist validates being abducted by aliens it's time to listen." Describing the book as "a work that will forever change our perception of reality," the release quoted Mack's claim that abduction "has important philosophical, spiritual, and social implications...this work has led me to challenge the prevailing world view or consensus reality." The packaging of the book itself incorporated these themes. The book was tagged on its cover as "science/psychology." It was declared "eye-opening, provocative, and above all authoritative" in cover blurb. According to book-flap blurb, Mack "takes his clients' accounts seriously" and "makes clear" in the text "why he believes their testimony may transform the foundations of human thought.... [Mack] illuminates the vast implications" of the phenomenon "for his understanding of human psychology and our identity as a species."

Invoking a well known scientific authority to justify his views, Mack (1994a) wrote in *Abduction* that he had consulted Thomas Kuhn, whom he identified as a lifelong friend, about exploring abduction. Mack wrote that Kuhn told him the conventional scientific worldview "had come to assume the rigidity of a theology...[a] belief system...held in place by the structures and polarities of language, such as real/unreal, exists/does not exist, objective/subjective, intrapsychic/external world, and happened/did not happen. He

suggested that in pursuing my investigations I suspend to the degree that I was able all those language forms...putting aside whether or not what I was learning fit any particular worldview... This...has been the approach that I have tried to follow" (p. 20). Nonetheless, Mack rhetorically constructed himself as a legitimate scientist and a conscientious clinician in this book, his research as legitimately scientific and conscientiously clinical. "I will report...what I have learned primarily from my own cases…make interpretations and draw conclusions on the basis of this information," he wrote in his introduction (p. 3). And in his conclusion he noted, "As a clinician, I have spent countless hours trying to find alternate explanations" (p. 400).

Mack called abduction stories a "phenomenon," and he called the people who reported them "experiencers." He reported that these people believed they had been abducted and that he believed that they believed they had had these experiences. He avoided stating directly that he believed his experiencers had been abducted by extraterrestrial beings. But he also wrote of abduction experiences in a way that could lead readers to assume that he believed abductions and abductors were real. "The abduction phenomenon has led me to see," Mack wrote in his introduction, "that we participate in a universe or universes that are filled with intelligences from which we have cut ourselves off, having lost the senses by which we might know them" (p. 3).

And in his concluding chapter, "Alien intervention and human evolution" (p. 387), Mack wrote:

> Although the alien beings seem to be intervening to alter our consciousness in such a way that our aggression would be reduced, they seem genuinely puzzled

> regarding to degree of our…gratuitous destructiveness (p. 396)…. For me the future role that the [human-alien] hybrid offspring are being prepared to play represents one of the most puzzling aspects of the entire abduction phenomenon…. My impression is that we may be witnessing...an awkward joining of two species, engineered by an intelligence we are unable to fathom…. I base this view on the evidence presented by the abductees (p. 415).

Revealing some awareness of the rhetorical strategy he was employing, Mack wrote in the preface to *Abduction* that in exploring "phenomena that exist at the margins of accepted reality, old words become imprecise and must be given new meanings" (p. xi). For instance, "thinking of memory too literally as 'true' or 'false' may restrict what we can learn about human consciousness from...abduction experiences" (p. xi). His account of his discussion with Kuhn advanced this rhetorical strategy as well. Mack addressed epistemology and ontology in his introductory chapter, asserting that his work with abductees "has led me to challenge the prevailing world view or consensus reality…the materialist/dualist scientific paradigm" in which what is real is "what can be perceived by the physical senses" (p. 3). According to the conventional scientific worldview, "intelligence is largely a phenomenon of the brain; by this worldview if "intelligence is experienced as residing in the larger cosmos, this perception is an example of 'subjectivity' or a projection of our mental processes" (p. 3). The question of "whether abductions are really taking place leads…to…questions about perceptions and levels of consciousness. The most glaring question is whether there is any reality independent of consciousness" (p. 8). (In his conclusion to the book he wrote, "An expanded epistemology, especially in psychology, may demand the legitimization…of neglected aspects of ourselves as instruments of knowing" (p. 390).)

Turning up the heat of his challenge to the boundaries of conventional science and extending his expertise from human consciousness to human survival, he also declared that through his work with abductees, "It has become clear to me…that our restricted world view…lies behind…major destructive patterns that threaten the human future — mindless corporate acquisitiveness…hunger and diseases; ethnonational violence…mass killing…nuclear holocaust; and ecological destruction" (pp. 3-4).

In his concluding chapter Mack wrote of "transformational and spiritual phenomena" (p. 396) relating to abduction. "Many abduction experiences are unequivocally spiritual," he claimed. "The alien beings…may…be seen as intermediaries, closer than we are to God or the source of being. Sometimes…they may even be seen as angels or analogous to God" (p. 397). Distinguishing between spiritual and "religious implications" (p. 409), he observed:

> Religious leaders instruct us in the nature of God, and determine for us what spirit beings or other entities may exist in the cosmos…. There can be little place, especially within the Judeo-Christian tradition, for [extraterrestrial] beings who administer an odd mixture of trauma and transcendence without apparent regard for any established religious hierarchy or doctrine (p. 412).

"My own impression," he wrote, "is that consciousness expansion and personal transformation is a basic aspect of the abduction phenomenon," but he also admitted, "my focus upon growth and transformation might reflect of bias of mine" (p. 399). He suggested in conclusion:

> As we suspend the notion of our preeminent and dominating intelligence, we might open to a universe filled with life-forms different from ourselves to whom we might be connected in ways we do not yet comprehend. The connecting principle…appears to be love. In the discovery of a fundamental, loving interconnectedness, we might…evolve toward wholeness (p. 422).

Mack described what he called the phenomenology of alien abduction in Chapter Two of his book, relaying a synthesis of abduction stories reported to him. "Although some abductees may recall only a single dramatic experience…it generally turns out that encounters have been occurring from early childhood" (p. 29). These experiences typically begin, Mack wrote:

> In homes or when abductees are driving automobiles…. In some cases the experiencer may be walking in nature…. The first indication that an abduction is about to occur might be an unexplained intense blue or white light that floods the bedroom, an odd buzzing or humming sound, unexplained apprehension, the sense of an unusual presence or even the direct sighting of one of more humanoid beings in the room, and, of course, the close-up sighting of a strange craft….
>
> After the initial contact, the abductee is commonly 'floated' (the word most commonly used) down the hall, through the wall or windows of the house, or through the roof of the car. They are usually astounded to discover that they are passed through solid objects, experiencing only a slight vibratory sensation. In most cases the beam of light seems to serve as an energy source or 'ramp' for transporting the abductee from the place where the abduction starts to a waiting vehicle. Usually the experiencer is accompanied by one, two or more humanoid beings…to the ship. At some point early in this process the experiencer discovers that he or she has been numbed or totally paralyzed by a touch…or an instrument (pp. 33-34).

Mack summarized "procedures" that abduction experiencers reported:

> The abductee is usually undressed and is forced naked, or wearing only a single garment such as a T-shirt, onto a body-fitting table where most of the procedures will occur…. The [alien] beings seem to study their captives endlessly, staring at them…often with the large eyes up close to the humans' heads. The abductees may feel as if the contents of their minds have been totally known, even, in a sense, taken over. Skin and hair, and other samples from inside the body, are taken….
>
> Instruments are used to penetrate virtually every part of the abductees' bodies…. Extensive surgical-like procedures done inside the head have been described…. The most common, and evidently most important procedures, involve the reproductive system. Instruments that penetrate

> the abdomen or involve the genital organs themselves are used to take sperm samples from men and to remove or fertilize eggs of the females. Abductees experience being impregnated by the alien beings and later having an alien-human or human-human pregnancy removed. They see the little fetuses being put into containers on the ships, and during subsequent abductions may see incubators where the hybrid babies are being raised….
>
> In sum, the purely physical or biological aspect of the abduction phenomenon seems to have to do with some sort of genetic or quasi-genetic engineering for the purpose of creating human/alien hybrid offspring. We have no evidence of alien-induced genetic alteration in the strictly biological sense, although it is possible that this has occurred (pp. 38-39).

Mack also reported on "the provision of information and the alteration of consciousness" reported by abduction experiencers:

> This is not a purely cognitive process, but one that reaches deeply into the emotional and spiritual lives of the experiencers…. The information concerns the fate of the earth and human responsibility for the destructive activities that are taking place on it. It is conveyed by…mind-to-mind telepathic communication…and through powerful images shown on…screens on the ships…. Scenes of the earth devastated by a nuclear holocaust, vast panoramas of lifeless polluted landscapes and waters, and apocalyptic images of giant earthquakes, firestorms, floods and even fractures of the planet itself are shown by the aliens (pp. 39-40).

Other abduction researchers, Mack wrote, "believe…the beings…are deceiving [abductees] into believing that they are concerned with our fate while they proceed to take over our planet…. The aliens themselves…say that we are not ready to acknowledge their existence, and would treat them…as an enemy…. [T]he aliens say…[t]hey do not wish to bring about change through coercion but rather through a change in consciousness" (p. 40).

The *Washington Post* published an excerpt from *Abduction* (Mack, 1994b) in its weekly opinion section, beginning with Mack's declaration:

> I feel sometimes that in the mental health profession we are like the generals who are accused of always fighting the last war, invoking the diagnoses and mental mechanisms with which we are familiar when confronted with a new and mysterious phenomenon, especially if it is one that challenges our way of thinking (p. C1).

In this excerpt Mack rhetorically constructed himself as a scientific insider *and* an outsider, a competent scientist doing legitimate research and a challenger of convention as well. He framed his research as conventional, inside the boundaries, relying on standard scientific language of "testing," "sample[s]", "evidence," and "the literature" (pp. C1, C4). He said he based his views "on the evidence presented" (p. C4), situating his work within the boundaries of legitimate science (though this evidence was narrative, provided by abductees). He employed another kind of language to present his work as boundary-breaking: "the phenomenon...seems to shatter the notion that we are the preeminent intelligence in the cosmos…we [may] now learn about the physical world with only limited use of our faculties…we may need a different kind of consciousness" (p. C4).

In *Abduction* Mack (1994a) constructed his claims about the legitimacy of abduction as a research subject in ways that made him appear to be anticipating, and attempting to deflect, criticisms. (In an interview conducted in 1999, Mack told me that he had, indeed, anticipated criticism of claims made in *Abduction*; see below.) In what appeared to be anticipation of claims that alleged abductees were recalling elements of fiction rather than experience, Mack (1994a) wrote, "Most of the specific information that the abductees

provided about [aliens, spacecraft, procedures] had never been written about or shown in the media" (p. 1). In what appeared to be anticipation of claims that experiencers were crazy, seeking attention, or swapping stories, he wrote that the people he had worked with "had not communicated with each other…seemed in other respects quite sane, had come forth reluctantly…[and] had nothing to gain materially from telling their stories…. There was nothing to suggest their stories were delusional, a misinterpretation of dreams, or the product of fantasy" (pp. 1-2). In what appeared to be anticipation of claims that he had not methodically evaluated his subjects, he wrote, "Efforts to establish a pattern of psychopathology other than disturbances associated with a traumatic event have been unsuccessful…. Psychological testing of abductees has not revealed evidence of mental or emotional disturbance that could account for their reported experiences" (p. 16). "Virtually no scientific authority has evolved that I might use to bolster my arguments or conclusions" (p. 3), he wrote, placing himself on the frontiers of scientific research, that boundary area between legitimated and new, not-yet-legitimated, knowledge.

Mack labeled his client-subjects "co-investigators" and "co-creators" in his scientific explorations, blurring the conventional boundary between scientist and subject and bumping up against that old Mertonian ethos of disinterestedness (Merton, 1996). He justified this approach: "In this work, as in any clinically sound investigation, the interaction of the psyches of the client and the clinician is the means of gaining knowledge" (p. 25). He detailed his method of hypnosis (which would prove to be highly controversial, as revealed later in this chapter and in Chapter 5) but reported that while it "seems to be highly effective…I do not quite understand why this is so" (p. 21). "Critics

and skeptics cite work on the inaccuracy of recall with hypnosis," Mack noted. "I believe that these criticisms cannot be supported," he wrote:

> Daniel Brown, *a noted expert* in the field of hypnosis research, determined after carefully *reviewing the literature* on recall among trauma sufferers under hypnosis that there are *simply no studies* of the accuracy of memory in this population…. Rather, conclusions regarding the inaccuracy of recall under hypnosis have been based on studies in which an environmental context was created and memory was tested in relation to events that were of peripheral importance to the subject (p. 24, emphases added).

(Mack cited a personal communication with Brown as his source of information on this subject.) Mack dismissed concerns about lack of physical evidence by emphasizing the primacy of experience:

> The physical phenomena that accompany abductions are important, but gain their significance primarily in that they corroborate the experiences themselves, for the effects tend to be subtle and would not by themselves convince a Western trained clinician of their meaning (p. 41).

In the end he re-declared himself a proper skeptic:

> The abduction phenomenon was, in the beginning, as unbelievable to me as it is to any skeptic...I have tried to be aware of any inclination to form new beliefs and convictions that might take the place of the previous ones that have been so radically called into question (pp. 389-400).

Mack opened and closed his book with ignorance claims, observing at first that the "difficulty in estimating the prevalence of abductions lies in the fact that *we do not know* what an abduction really is" (p. 15) and reporting at last, "*I cannot say* that the cases selected have been 'typical,' because *I do not know* what a typical case would be, or even that there is such a thing… The ultimate source of these experiences remains *a mystery* [emphases added]" (p. 389).

Act II, Scene II: Scientists and skeptics have their say

In constructing abduction experience and "experiencers" as subjects worthy of psychiatric, scientific study, Mack validated the idea that people could repress and recover memories of abduction experience, and he employed hypnosis to help clients recall these traumas. The fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) did not recognize or otherwise validate repressed and recovered memory or the abduction phenomenon as legitimate mental disorders. Mack did not refer to abduction experiences as a psychiatric syndrome or mental disorder; he labeled them a "phenomenon." He also claimed that determining whether memories of abduction were real or not was not his goal: if such memories, true or false, were causing pain then his aim was to alleviate that pain. With this attempt to maintain his credibility as a clinician, he thus circumvented the traditional system of classifying mental disorders.

In the *Journal of the American Psychoanalytical Association*[6], Cambridge psychiatrist Sanford Gifford (1994) reviewed *Abduction* for Mack's peers. The book "calls for a response from his fellow analysts, who see him as a friend and respected colleague, admired for his clinical work, his scholarly biography of T.E. Lawrence, and his activities for peace and…conflict resolution" (p. 1291), Gifford began. But "in his new self-chosen role as a Prince of Our Unreason," he said, Mack has produced a book "that is easy to dismiss as a wide-ranging attack on Western European traditions of rationality and experimental science" (p. 1291). Gifford deemed *Abduction* "a subversive assault on psychoanalysis as a science" (p. 1291). Mack's "co-creative method…leaves him open

to…*mutual* suggestibility [emphasis in original]," and his "abduction scenarios prove to be banal and highly monotonous"; it is likely that "their similarities reflect the universality of the human unconscious" (p. 1293), Gifford observed. "Just as Freud tenaciously defended his adherence to Lamarckian theories…against Ernest Jones's scientific reasoning," otherwise "highly intelligent, even skeptical minds can become converts to irrational beliefs" (p. 1296), he concluded. Mack would be compelled to respond to Gifford's critique in the paperback edition of *Abduction* (see below*)*.

In his 1995 best-selling book *The Demon-Haunted World: Science as a Candle in the Dark*, astronomer and science popularizer Carl Sagan — a friend of Mack — wrote about abduction in general and Mack's abduction research in particular (along with topics such as "the face on Mars" (p. 41), "antiscience" (p. 245), ""significance junkies" (p. 367), and "science and witchcraft" (p. 401).) In a chapter entitled "Hallucinations" (p. 97), Sagan took on the debunking of alien abduction accounts, offering more mundane explanations for them, and he cited Mack's (1970) own book on nightmares (on p. 107) as an authoritative source of information about how easily the boundaries between waking and dreaming life can be blurred in the human mind. In a chapter entitled "Therapy" (p. 153), Sagan tackled Mack's claims about abduction, focusing on the idea that traumatic memories can be repressed and recovered. Sagan wrote that in *Abduction* (Mack, 1994a):

> Mack explicitly proposes the very dangerous doctrine that 'the power or intensity with which something is felt' is a guide to whether it's true…. Doesn't Mack, himself the author of a book on nightmares, know about the emotional power of hallucinations?" (p. 153).

Again assuming the debunking stance, Sagan concluded:

> Why should we imagine we recollect…any better than we know when we're on firm ground? Why should we suppose that, of the vast treasure of memories stored in our heads, none of it could have been implanted after the event…? (p. 168).

"That remorseless taskmaster called the scientific method," Sagan wrote in a chapter entitled "Aliens," dictates that "everything hinges on the matter of evidence" (p. 61). With regard to claims that alien spacecraft have visited Earth, he argued, "on so important a question, the evidence must be airtight. The more we want it to be true, the more careful we have to be. No witness's say-so is good enough" (p. 69). He debunked reports of UFO sightings, dismissing "essentially all the UFO cases" he knew of as " anecdotes, something asserted" (p. 69). "Most people honestly reported what they saw," Sagan claimed, "but what they saw were natural, if unfamiliar, phenomena" (p. 70), and "many UFO photos turned out to be fakes" (p. 71).

Chapter 1 explained how the publication of *Abduction* (Mack, 1994a), and all the attention it stirred up, took place amid a vigorous public debate spanning the 1990s (though originating decades earlier with Freud's original idea) over the validity of the concept of repressed and recovered memory. As psychiatrist Walter Reich (1994) claimed in no less an authoritative source than *The New York Times Book Review*, the so-called memory wars appeared to be struggles over authority, if nothing else. The memory wars provided a backdrop for expert and other responses to Mack's abduction claims.

Commenting in the '90s, Geertz (1997) characterized the ongoing tug-of-war for authority over mind and memory as a conflict between the constructivist worldview of

what he called cultural psychology and the reductionist worldview of scientific psychology. While scientific psychology assumes that human behavior, cognition, and affect are products of neurobiological processes, according to Geertz, cultural psychology assumes, alternatively, that people actively participate in constructing their selves —"out of materials lying about in…society" — their methods of understanding others, the meanings they impart to things, and the stories by which they make sense of the world. While criticisms of Mack acknowledged both of these worldviews, the most strident critiques reflected the reductionist/scientific perspective (see Chapter 5).

Act II, Scene III: The year after, and aftermath

The year 1995 encompassed the completion of Harvard Medical School's investigation of Mack's research methods and the paperback reissue of *Abduction*. In the *Harvard Crimson*, Harvard law professor Alan Dershowitz (1995) criticized the medical school for investigating Mack's work, claiming it was Mack's ideas, not his methods, that were being questioned. "No great university should be in the business of investigating the ideas of its faculty" (p. 2), Dershowitz wrote, continuing:

> If Dr. Mack had taught at the Divinity School, it is unlikely that any investigation would be tolerated, since divinity schools are not governed by the laws of science. Indeed, it is at least as likely that space aliens exist as it is that God exists. The former is, however, a scientifically testable hypothesis (at least in theory); whereas the latter—for at least most theologians—is not. It is a matter of 'faith,' not proof, and faith is not subject to the scientific method. But the paradigm of the scientific method—propositions subjected to double-blind and replicable experimentation—is not the only criteria *[sic]* for evaluating academic undertakings. This is certainly true in the formative, exploratory phases in the development of an idea (p. 2).

Harvard Medical School concluded its investigation without censuring Mack. "Dean Tosteson...has urged Dr. Mack that, in his enthusiasm to care for and study this group...he should be careful not, in any way, to violate the high standards for the conduct of clinical practice and clinical investigation that have been the hallmark of this Faculty," the Medical School said in a statement. " He also reaffirmed Dr. Mack's academic freedom to study what he wishes and to state his opinions without impediment. Dr. Mack remains a member in good standing of the Harvard Faculty of Medicine" (Emery, 1995c).[7]

The paperback edition of *Abduction* (Mack, 1995) featured a new introduction in which Mack explicitly stated that he was responding to criticisms from fellow psychoanalyst Gifford (1994) and, more surprisingly, journalists James Gleick (1994) and Milo Miles (1994), who had reviewed *Abduction* (1994a) for *The New Republic* and the *Boston Globe*. Though he alluded in the paperback to "critics, especially…colleagues in science and medicine, and even…those in the UFO field itself" (p. 424), Mack named no other critics (and among all the texts about Mack's abduction research examined for this analysis, only Gifford's, Gleick's, and Miles's texts were included in Mack's references for the paperback *Abduction* (Mack 1995, see pp. 449-455).

Mack deleted a number of contentious claims he had made in the hardcover *Abduction* from the paperback edition of the book, including the following:

> The experience of working with abductees has affected me profoundly…. We participate in a universe or universes that are filled with intelligences from which we have cut ourselves off…. Our restricted worldview...lies behind most of the major destructive patterns that threaten the human future (1994a, p. 3).

Mack reprocessed some of his rhetoric from the hardcover to the paperback (1995) edition, to the apparent end of making his claims more rather than less ambiguous. In the hardcover, he had claimed "experience, the reporting of that experience, and the receiving of that experience through the psyche of the investigator" were "the only ways that we can know about abductions...in the absence of physical verification or 'proof' (always quite subtle in the abduction phenomenon...)" (1994a, p. 25). In the paperback, he wrote instead that experience and the reporting and receiving of it were " in the absence of physical verification sufficiently robust to satisfy scientific requirements of proof (there is physical evidence but not proof), the only ways that we can know about abductions" (1995, p. 11). "I ask [abductees] if they can find any explanation for feelings that intense," he wrote in the hardcover (1994a, p. 26). He revised this statement in the paperback to report that he asked abductees to "explore other possible explanations for feelings that intense" (1995, p. 12). What he called "conscious recall or recall with the help of hypnosis" in the hardcover (1994a, p. 2) he relabeled "conscious reports or reports with the help of hypnosis" in the paperback (1995, p. 2).

Mack also added two new appendices to the paperback *Abduction*: "a brief review of issues relating to the reality of the abduction phenomenon" (Mack, 1995, p. 423) and "a historical and cross-cultural perspective on reported encounters" (p. 437, coauthored with Dominique Callimanopulos). In his "brief review" he addressed questions critics had raised about:

> The nature of the physical evidence which accompanies abduction reports; the clients' expectations and possible investigator influence; the reliability of memory in relation to the experiences; the degree to which hypnosis influences the

> accuracy of memory; and alternatives to the hypothesis that what the experiencers describe is…what occurred (p. 423).

About his use of hypnosis, Mack wrote in the hardcover *Abduction*:

> The inducement of a nonordinary state, a modified form of hypnosis...seems to be highly effective.... Abductees seem to move readily into trance.... Sometimes the simplest...of relaxation techniques is all that is needed to bring back many memories. It is as if hypnosis undoes...the forces of repression (Mack, 1994a, p. 21).

In the paperback, he removed the words "hypnosis" and "trance" from this passage and made some other changes as well:

> The inducement of a nonordinary state, using even the simplest of relaxation techniques, seems to be highly effective.... Most of the abductees I have worked with seem to move readily into a non-ordinary state of consciousness.... It is as if the changed state...undoes the forces of repression (Mack, 1995, p. 9).

In the hardcover, he wrote:

> The type of hypnosis or nonordinary state I employ has been modified by my training and experience in the holotropic breath work method [which] utilizes deep, rapid breathing, evocative music, a form of bodywork, and mandala drawing, for the investigation of the unconscious and for therapeutic growth (Mack, 1994a, p. 22).

He deleted this passage from the paperback. In the hardcover Mack wrote of retrieving memories; in the paperback he wrote, instead, of exploring the abduction experience. What he called "hypnotically recovered memories" in the hardcover (Mack, 1994a, p. 24) became "hypnotically recovered material" in the paperback (Mack, 1995, p. 11). In the hardcover, Mack said he found no reasons to think that abduction stories were the products of dreams, delusions, or fantasies. In the paperback, he said he found no reasons to think these stories were not real.

The overall effect of Mack's revisions was one of distancing or detachment from some of the more controversial statements he had made in the hardcover *Abduction* (for example, about hypnosis, repressed and recovered memory, holotropic breathwork) and at the same time reinforcement of his overall assessment of the abduction phenomenon. But while he tempered the language of some of his claims, he did not abandon any of them, and in one of his new appendices, "A brief review of issues relating to the reality of the abduction phenomenon" (Mack, 1995, p. 423), he defended and bolstered them. Over the next few years, Mack would stick to his claims; his narrative of the abduction phenomenon and his examination of it would remain consistent, with only minor adjustments made, apparently to meet the needs of different audiences. For example, in an essay published by his Program for Extraordinary Experience Research (PEER) on the "science of not knowing," Mack (1996a) framed abduction as a subject of scientific study. Public discourse about abduction, he wrote:

> Remains focused largely on the question of whether or not it is real in the strictly physical sense…. Some skeptics even claim…that, insofar as the physical evidence for the reality of the phenomenon does not meet standards of scientific proof, we can presume…that it does not exist…. But what if the phenomenon were subtle in the sense that it may manifest in the physical world, but derive from a source which by its very nature could not provide the kind of hard evidence that would satisfy skeptics for whom reality is limited to the material? (p. 5).

The abduction phenomenon may be "intrinsically mysterious and, ultimately, beyond our present framework of knowledge" (p. 5), he suggested. "An attitude of humility…an open attitude…[an] opening of consciousness," he concluded, "could result in greater knowledge not only about the physical aspects of the phenomenon, but about numinous dimensions as well" (p. 5).

Following the publication of *Abduction* (Mack, 1994a), critics had homed in on Mack's failure to publish his research results in peer-reviewed journals and his decision to

publicize his findings in mass media (a popular book, TV talk shows, and so on; see Chapter 5). In the wake of the "firestorm" of publicity for the book and the Medical School investigation, Mack chose to decline most journalists' requests for interviews[8], subsequently showing a preference for audiences sympathetic to his views. For example, Mack spoke to the 27th annual MUFON symposium (July 1996), a "star wisdom conference" on "exploring contact with the cosmos" (May 1998, cohosted by PEER and the Interface Foundation), the "7th World Symposium on Unidentified Flying Objects and Related Phenomena" (May 1999) sponsored by an Italian UFOlogy group, and a conference on "the UFO abduction phenomenon" sponsored by Budd Hopkins' Intruders Foundation (May 2000).[9]

Peer-reviewed publication

The longer the social construction of facts takes, the more texts come into play in the construction process, and "the scientific article," as Latour (1987) pointed out, is "the most important and the least studied of all rhetorical vehicles" for the social construction of scientific authority (p. 31). In 1996, Mack published his first peer-reviewed paper about abduction, coauthored with two colleagues from PEER (McLeod, Corbisier, & Mack, 1996). Certainly the most "scientific" of the array of articles he wrote, the paper appeared in *Psychological Inquiry: An International Journal of Peer Commentary and Review*, which dedicated an issue to the subject of the abduction phenomenon.

This abduction issue included a "target" article by psychology professors Leonard S. Newman of the University of Chicago and Roy F. Baumeister of Case Western Reserve

University (1996b) offering alternative explanations for the abduction phenomenon, along with a number of commentaries providing a wide range of judgments on the Newman-Baumeister target article and the McLeod, Corbisier, and Mack paper. The authors of all of these papers addressed their subject dispassionately, clinically, scientifically — in a way that was rhetorically appropriate for the venue. At the same time some of the authors also reflected their own particular interests in their texts.

In their target article Newman and Baumeister (1996b) proposed that abduction stories were the products of hypnotic elaboration, spurious memories, fantasies of extraterrestrial sadomasochism, and a desire to escape the self. "UFO abduction accounts express the goal of escaping from awareness of the self's most burdensome aspects, such as its needs for esteem and control" (p. 100), they claimed. References for this article included several papers and books authored or co-authored by Baumeister on "the struggle for self," "escaping the self," "how the self became a problem," "masochistic scripts," and "masochism and the self."

In a commentary, "Fantastic accounts can take many forms: false memory construction? Yes. Escape from self? We don't think so," University of Arizona psychology professors Jamie Arndt and Jeff Greenberg (1996) faulted Newman and Baumeister for "continually rely[ing] on *questionable sources of data* without sufficient acknowledgement or consideration of their *unreliable and biased* nature [emphases added]" (p. 127) — that is, for not being scientific enough. Arndt and Greenberg called for "*systematic collection of new data*, along with more *systematic, less biased, and more comprehensive analysis* of

existing archives [emphases added]" (p. 131). Yale University psychology professors Mahzarin R. Banaji and John F. Kihlstrom (1996) claimed in another commentary, on "The ordinary nature of alien abduction memories," that such memories were delusions, "false, but highly valued, beliefs about oneself" (p. 133). Claims of abduction memories "should not merely be dismissed as evidence of…credulity or lunacy, or mass hysteria, or…preoccupation with the supernatural and paranormal," Banaji and Kihlstrom wrote; "explaining them in naturalistic terms and demystifying them ought to be [psychologists'] business" (p. 135). References for this article included a paper coauthored by Kihlstrom on hypnosis and the psychology of delusions.

University of Waterloo psychology professors Kenneth S. Bowers and John D. Eastwood (1996), in a commentary entitled "On the edge of science: coping with UFOlogy scientifically," began, "One of the interesting issues raised by Newman and Baumeister's…article is the boundary that separates scientific from nonscientific claims" (p. 136). While they found Newman and Baumeister's explanation for abduction memories "more plausible than the literalist view they reject" (p. 136), Bowers and Eastwood asked, "is their theory empirically tenable, or is its claim to being scientific due primarily to the fact that it replaces an extremely implausible, literal account of such abductions" (p. 137)? They ultimately rejected Newman and Baumeister's explanation, concluding that such a "motivational account of UFO memories" would suffer the typical fate of "psychoanalytic hypotheses regarding the human condition, which have never had much appeal to the mainstream scientific establishment and…are now being seriously

challenged because of social problems that adherence to some of them has wreaked" (p. 139).

In a commentary on "the construction of space alien abduction memories," psychology professors Steven E. Clark of the University of California-Riverside and Elizabeth F. Loftus of the University of Washington (1996) claimed people can invent false memories "with some help" (p. 140) — that is, suggestion, or what they called "the misinformation effect" (p. 141). Clark and Loftus invoked the authority of "the Council on Scientific Affairs of the American Medical Association…the International Society of Hypnosis…and the society for Clinical and Experimental Hypnosis" as scientific organizations that "have published strong warnings concerning the use of hypnosis as a tool in memory retrieval" (p. 142). Loftus had already established herself as an expert on false memories at the time this article was published (see Loftus, 1993; Loftus & Ketcham, 1994).

In his commentary, "When scientific explanations fail: science and pseudoscience in psychology," Dartmouth College psychology professor Jay G. Hull (1996) claimed Newman and Baumeister's explanation for abduction memories was "entertaining" but flawed "as a reasoned argument" and constituted an effort "to legitimate a pseudoscientific enterprise that is to the detriment of this field" (p. 149). Hull asserted, "The arguments constructed by Newman and Baumeister are no less post hoc than the arguments they attack" (p. 149). Newman and Baumeister had relied on "nonexperimental research — content analyses of retrospective oral and written

accounts" (p. 149) — to formulate their explanation, and thus their explanation was not scientific. Hull declared it "pseudoscience," and not even "good pseudoscience," because it "is not internally coherent, is less parsimonious than existing accounts, and…lacks plausibility" (p.150).

Robert Wood Johnson Medical School psychiatry professor Donald P. Spence (1996) examined "abduction tales as metaphors" in his commentary for the *Psychological Inquiry* issue, speculating that perhaps abduction stories could "be better understood as metaphors for an ongoing cultural crisis" (p. 177). Spence agreed "that masochism and loss of self are two key ingredients in the stereotypical abduction story" but said those features "might be secondary to…the modern sense of powerlessness, helplessness, and anomie" (p. 178). "As we move into the 21st century," Spence concluded, "escape from freedom has been followed by escape from reason…. Systematic analysis of UFO abduction stories might be one of the best ways to understand and eventually counteract this" trend (p. 179).

In their response to these commentaries, Newman and Baumeister (1996a) agreed with their critics that they had not provided scientific proof of their theory. Their point, they said, "was to argue that…other phenomena provide a plausible way of understanding UFO abduction narratives…*we remain firm in our belief* [emphasis added] that ignoring the motivational themes of the UFO abduction narrative will only hinder our understanding of it" (p. 196).

The commentary by McLeod, Corbisier, and Mack (1996), entitled "A more parsimonious explanation for UFO abduction," was rich with the rhetoric Mack had previously employed to establish his abduction research as legitimate. The rhetoric employed in this paper was more conventionally scientific than the rhetoric Mack employed in *Abduction* and other writings about this research. Such an adjustment was proper for publication in a scientific journal. However, Mack's typical abduction story — his description of the phenomenon and his approach to studying it — remained essentially intact. The description and justification of the research in this article firmly located the PEER researchers within the boundaries of the established scientific community and their abduction research within the boundaries of legitimate science. "As members of a culture that defines reality in a very structured way," they wrote:

> Scientists are motivated to embrace a simplification of anomalous data like abduction experiences. This minimizes our own cognitive dissonance and allows us all to dismiss this phenomenon before we are forced to examine more closely the data involved. Were it not for clinical contact with individuals who demand of us compassion and careful evaluation, the authors of this commentary would also find it expedient to dismiss the phenomenon (p. 156).

Mack and his coauthors described what good science ought to be and placed their research firmly inside the boundaries they drew: "In the interest of science," they asserted, "*abduction experiences should be a matter of investigation rather than belief*" (p. 156). "*It is the job of scientists to observe and ask questions about…anomalies rather than to come to conclusions based on inadequate* categories of *knowledge* [emphases added]" (p. 160). Abduction "challenge[s] very basic tenets on which Western civilization is based," they wrote, "tenets that we, as Western scientists, are personally invested in defending" (p. 156). Scientists and other "Western" thinkers have a "cultural

bias" against accepting abduction as a subject of scientific study because the idea of abduction "dethrones us "from our position of mastery and predominance in the universe," they asserted, "threaten[s] our personal sense of safety [and] challenge[s]…dualistic thinking" (p. 157). Enhancing this bias, "most of the information about the abduction phenomenon has been disseminated by the popular press, which is neither educated in psychological complexities nor motivated to present subtleties," they wrote. "The press tends to sensationalize and polarize issues," and thus "few serious scientists are interested in pursuing it" (p. 157).

More boundary-work was done in this paper with the delineation of a difference between the clinician's (e.g. Mack's) and the research psychologist's approach to studying "psychological events," justifying their own approach to the study of abduction and explaining away others' resistance to it. Here Mack and his colleagues described the research psychologist's perspective on the abduction phenomenon as "truncated," thereby implying that their own perspective was broader:

> Research psychologists tend to study and evaluate psychological events separate from the individual who reports them. Clinicians evaluate psychological events within the context of the person who is speaking. From the truncated view of the research psychologist, the abduction experience is hardly worth studying. The content is 'crazy' because it significantly deviates from our understanding of shared reality -- the common definition for craziness. From the view of the clinical researcher, the content of the abduction material is interesting because of its role in a person's life story (p. 158).

Mack and his colleagues dismissed alternative explanations one by one in this paper, including Neumann and Baumeister's theory that abduction experiences are masochistic fantasies, in the same way that the scientists who had offered those alternative

explanations had dismissed their claims about abduction. "Newman and Baumeister, like the majority of the scientific community, have felt obliged to declare their belief in the nonreality of the phenomenon" without the benefit of "careful, first-hand study of these experiences" (p. 156), they observed.

The authors who evaluated Mack and his colleagues' claims about abduction for *Psychological Inquiry* were properly respectful of their fellow researchers but ultimately applied their own pet theories – their own (in some cases, their own published) frames of meaning – to interpreting those claims. They followed a typical pattern of scientific critique, focusing on what Bowers and Eastwood (1996) called "the boundary that separates scientific from nonscientific claims" (p. 136), questioning claims of physical evidence, empirical observations, data collection. The one contributing author identified as a psychiatrist (Spence, 1996) strayed from this pattern, considering "abduction tales as metaphors" (p. 177) and addressing how the abduction phenomenon "can be better understood" rather than picking at specific claims about it. The end result was nothing more or less than what the journal's title promised – "peer commentary and review." Authors drew the boundaries of science to justify and legitimize their claims, and Mack once again drew those boundaries to justify and legitimize his abduction research.

Act III, "The expert's authority at risk":

Benign neglect — another book, sans firestorm

Following the completion of its investigation of Mack's abduction research methods, Harvard Medical School continued to treat Mack as a member of its faculty in good

standing. The Medical School's Department of Psychiatry newsletter continued to report on Mack's activities and accomplishments.[10] In April 1999, responding to a recommendation of the Medical School's investigating committee and reinforcing his own ongoing efforts to legitimize his abduction research, Mack's research organization PEER brought together a multidisciplinary group of academics from Harvard and other institutions for a two-day meeting "to consider how to effectively examine anomalies of human experience that seem not to reveal their secrets to the familiar approaches of Western medicine and science" (see Mack, 2000, p. 6**).**[11] Among the group's findings and recommendations were that "methods of science must fit the subject being considered…new ways of knowing need to be explored…careful phenomenological description and greater precision of language are essential…anomalies are central to the progress of science" and, of course, further studies were needed. Harvard Medical School emeritus professor Arnold Relman (see Chapter 7) said in a letter he wrote to Mack as a contribution to the meeting's proceedings, "If these stories are believed as literal factual accounts, they would contradict virtually all of the basic laws of physics, chemistry, and biology on which modern science depends."

Another book comes out

Through the late 1990s and into the next decade, Mack kept up his abduction research, and he continued to speak and write about it (e.g. 1996b), prompting the odd mainstream news report (e.g. English, 2000; King, 1999). In 2000, Mack published his second book on abduction, *Passport to the Cosmos* (Mack, 2000a). Mack was identified on the front cover of *Passport* as "Pulitzer Prize-winning author of the best-selling" *Abduction*

(Mack, 1994a). The cover blurb continued: "Mack powerfully demonstrates...[writes] with...authority...breaks provocative ground.... For Mack, questions of science...lead to questions of religion...Mack further solidifies his reputation as a...pioneer on the forefront of the science of human experience, an authoritative voice" (Mack, 2000a, back cover). While *Abduction* (Mack, 1994a) included no footnotes, no citations, and no index, *Passport…* included footnotes, extensive citations, an index, and a more extensive list of references. Mack took pains in this second book to be more scientific, qualifying claims and identifying limitations, omissions, biases, and conflicts.

As he had done in *Abduction* (Mack, 1994a), Mack (2000a) began and concluded *Passport…* with ignorance claims: "I wish to stress at the outset that I am not…seeking to establish the material reality of the abduction phenomenon." (Mack, 2000a, p. xi); "I cannot offer proof of the material reality of the abduction phenomenon." (p. 271). He continued to traverse the boundaries of science in *Passport*. He said abduction "seems to violate what…we have come to think of as real" (p. 19), and he noted that he would address "the problem of reality" (p. 19) in this book. He wrote of "uncharted terrains" remaining to be explored, "anomalies within the anomalous…. The boundaries of fantasy, metaphor, and actuality seem…to blur" (p. 19). Six years after the publication of *Abduction* (Mack, 1994a), he wrote in *Passport…* (Mack, 2000a): "we are just beginning...to understand" the abduction phenomenon. And he persisted in suggesting that the best way to understand this phenomenon may be to adopt "an attitude of not knowing, a kind of Buddhist-like 'empty mind'" (p. 10; also see preface, p. xii).

Mack stated at the start of *Passport…* (Mack, 2000a) that he would be focusing more upon "the informational and transformative elements" (p. 13) of abduction than he did in *Abduction* (Mack, 1994a). In *Passport…* he argued that a "radical split between spirit and matter…has dominated both Judeo-Christian tradition and Western science" (Mack, 2000a, p. 130), an idea he had explored at the end of *Abduction* (see above). In *Abduction* (Mack, 1994a) Mack had written that, for him, the phenomenon raised "fundamental questions…which seem to lie outside the ontological framework of modern science and appear to be unapproachable by its methods" (p. 404). He wrote in *Passport…* (Mack, 2000a) of "the epistemological and ontological walls that we have erected between the unseen realms of the cosmos and ourselves," claiming "the materialist juggernaut is loose…and the only thing that can stop it is a radical change in consciousness" (pp. 271, 277).

In *Passport…* Mack placed abduction in a category of "crossover phenomena" (p. 9) including, by his description, near-death and out-of-body experiences, cattle mutilations and crop circles — phenomena that "violate [the] barrier so sacred to the rationalist, between the forces of the unseen world and the material realm," he wrote; "any cosmic mystery might at least theoretically be thought of as simply a reflection of laws of the universe or subtler energies that we do not yet comprehend or know how to measure, rather than as 'paranormal' or 'supernatural'" (p. 9). He persisted in his contentious claim that these "anomalies...may require a new paradigm of reality" (p. 9), and at the same time he wrote that Harvard Medical School's investigation of his abduction research methods "brought home to me…how deeply held" (p. 5) the conventional scientific

worldview is held. He ascribed intelligence and agency to the so-called subtle realm and suggested that, in the material world, this intelligence might be acting like a trickster. "This crossover seems to be regarded as a regular occurrence in many…indigenous cultures, but in our Western or scientific/materialist society, the domains of spirit and matter have been kept separate" (p. 5).

Compared with the so-called firestorm of media coverage generated by *Abduction* (Mack, 1994a), *Passport…* (Mack, 2000a) received little mainstream media attention. Mack appeared on NBC's "Today" show and was heard on the syndicated "Dreamland" radio program, specializing in paranormal and pseudoscientific subjects, to talk about the book. But *Passport…* was not as widely reviewed in mainstream print mass media and certainly not in elite print mass media. Reviews did appear in fringe media such as *The Golden Thread* (a "new-age" newspaper) and the magazines *Fate, Night,* and *UFO*.[12] Later that year Mack published an op-ed in *The New York Times* on the presidential election results. Identified as a "professor of psychiatry at Harvard Medical School," Mack wrote that the Gore-Bush presidential 2000 election standoff might be the work of a mythological Trickster, "sent when a society is in crisis and no longer serving the needs of its people" (Mack, 2000b, p. A35).

In October 2002 Mack participated in an online "chat" about UFOlogy, sponsored by the SCI FI Channel. [13] Mack was identified as "a leading authority on the transformative and spiritual aspects of alien encounters." Asked "where aliens come from," Mack responded, "The first task in addressing that question is moving away from literal thinking" (answer

1). Asked "how are your relations with the Harvard faculty after your 'difficulties' surrounding your first book," Mack answered, "Pretty good. I'm not retired but I'm past retirement age. And as I often say, a Harvard prof can only make a fool of himself once. And I'm past that" (answer 4). On abduction, he said, "We're never going to pin all this down in 3-dimensional reality with the usual tools of science…. If we don't try to reduce it to our language we might appreciate and understand more than we realize" (answer 6). Scientific methodology "may be the wrong methodology" (answer 11) for studying abduction. "That's why I've looked at the profound experience that stands in its own light…. I tend to downplay the literal experience for the mystical" (answer 11). A month after this "chat" Mack spoke at a SCI FI-Channel-sponsored symposium in New York City on the UFO-abduction phenomenon. Also in 2002, Mack wrote an article on "Looking beyond terrorism: transcending the mind of enmity" for publication in a scholarly book, *The Psychology of Terrorism.*[14] And the following year Mack published an article on "shamanic journeys and UFO encounters" in a shamanic studies journal.[15]

In October 2003, the curtain effectively came down on the drama of Mack's abduction research and the media discourse about it when Mack's Program for Extraordinary Experience Research (PEER) was officially concluded. Described as a 10-year research initiative, the PEER project had run its course. The project had been financed by $1.2 million in gifts from philanthropist Laurance Rockefeller, who died in 2000; contributions from Mack and other members of his PEER board of directors; and donations from individual contributors.[16] Neither Harvard University nor Harvard Medical School had provided any support. About the ending of the project, PEER simply

said its time was up. About findings and conclusions, Mack claimed nothing more definitive than that his work with abductees:

> Reveal[ed] an experience that touches people deeply, affecting their outlook on spiritual, environmental, and social aspects of life.... The nature of aliens (whether or not they are 'real') [was] secondary to PEER's primary interest in how alien encounters affect people's lives and worldview (n.p.). [17]

In an interview I conducted for this analysis (see Appendix B), Mack described his abduction research, his interest in the subject, and his scientific worldview the same way he did in his own writings and in interviews with journalists. In this interview, he said of abduction experience, "it was not dreams, fantasy...all the other things...it behaved absolutely clinically," as if it had really happened. With regard to what he meant by "happened," he told me, "You can deconstruct words like 'happened' if you like...what do we mean by 'something happened'?" Of abductees, he said "they don't seem to have psychiatric problems, the stories they tell are consistent…. The problem, then," he explained, "was that what they were talking about was impossible from the standpoint of our worldview."

The "ideology" of conventional science dictates that phenomena "can't cross over...the sharp divide" between physical reality and the non-material world, Mack said in this interview, but in addition to the physical world of "manifest reality" there appears to be a "deeper reality." Mack told me he "had to open up" his thinking about the nature of reality, and he said he knew that taking this route would "cause a flap…. I was a little naive in that I didn't realize how far I had gone in opening to other possibilities." He told me that before *Abduction* (Mack, 1994a) was published:

> I would try to argue more for why I thought [abduction] was true, what was the clinical basis...I'd present the data and my psychiatric judgment about the data.... And I was a little naive in not appreciating that that was not sufficient. I didn't recognize that the data itself would not be enough. [And] data presented in certain forms is more acceptable.

Narrative, for example, his chosen form of data recording, is not as acceptable as, say, comparative studies, he told me. "I was mapping new territory," he continued, "I wasn't in a position" to do standard research. "Now I've gotten more able to work with peoples' resistance in advance of presenting information"; starting off by acknowledging that abduction seems impossible seems to work better, he said. "You can't just start by shooting the messenger," he told me, claiming that while this approach was the one journalists typically took with him, "I can't do [it] to them." With regard to challenging or defending the boundaries of conventional science, Mack observed in this interview, "When you're defending a worldview, anything goes, you don't have to know anything, you can just make pronouncements and they will fall on sympathetic ears because they're consistent with what the dominant worldview is."

There's credibility, and then there's credibility…

Mack's unique credentials — Harvard professor (and graduate), psychiatrist, Pulitzer prize — appeared to be durable enough to enable him to continue functioning as an expert and authority, at least to an extent that satisfied him. He could still command a coveted slot in the op-ed pages of *The New York Times* (e.g. Mack, 2000b), if not to talk about abduction then to address another interest. As noted above, he continued speaking, writing and publishing about abduction as well as other less controversial subjects. It is worth considering, briefly, how other experts with similar credentials and a similar

interest in abduction have talked about the subject, and how they have fared in their own credibility contests (Gieryn, 1999).

David M. Jacobs, Ph.D., an associate professor of history at Temple University specializing in 20th century American history and culture, has studied UFOs and alien abductions for decades.[18] He wrote his doctoral dissertation in history (University of Wisconsin-Madison, 1973) on "the controversy over unidentified flying objects in America." Jacobs has employed familiar rhetorical strategies to construct his work as scientific and himself as a credible researcher. On his UFO-abduction Web site he labels himself, for example, "one of the foremost UFO abduction researchers worldwide" and developer of "the first scientific typology of the abduction experience" (n.p.). For over 25 years, Jacobs has offered what he calls "the only regular curriculum university course on UFOs" (n.p.) at Temple. He recently created something called an International Center for Abduction Research (ICAR), which he heads, to disseminate "trustworthy information about abductions [and] help cope with the myriad of problems that arise from the use of hypnosis and other memory collection procedures" (n.p.). (Jacobs has claimed he has conducted around 900 hypnotic regression sessions with abductees since 1986.) "I have tried to be as objective and as 'agenda free' as possible," he says on his Web site:

> I have no New Age, spiritual, religious…program to promote. I try to stay as close to the evidence as I can…. The majority of evidence for the alien abduction phenomenon is from human memory derived from hypnosis administered by amateurs. It is difficult to imagine a weaker form of evidence. But it is evidence and we have a great deal of it. Still, readers must be skeptical of what I say and of what all others say in this tangled arena of alien abductions, hypnosis, popular culture, and memory (n.p.).

Jacobs has authored *Secret Life: Firsthand Accounts of UFO Abductions* (1992),

published two years before Mack's *Abduction* (1994a), and *The Threat* (1998), published two years after *Abduction*, a book that, in his words, "presents the first evidence-driven hypothesis that provides a falsifiable solution to the UFO mystery" (n.p.). (Both books were issued by *Abduction* publisher Simon & Schuster.) Mack cited Jacobs and his books several times in *Abduction* (Mack, 1994a, pp. 14, 15, 16, 19, 27, 38, 166, 414), at one point crediting him with "pioneering work" (p. 414). Jacobs has said he "is a strong advocate of strict scientific and ethical research methodology," with an interest in "ascertaining the proper methodological techniques for the hypnosis and therapy of abductees" (n.p.). In an article entitled, "Thinking clearly about the abduction phenomenon," based on a talk given at a 1998 Mutual UFO Network (MUFON) conference, Jacobs wrote:

> All UFO researchers are aware of the muddled and 'shoot-from-the-hip' thinking that non-UFO researchers, skeptics, and, especially, debunkers have employed over the years [linking] the abduction phenomenon to a myriad of internally generated phenomena with a wide range of causative factors.
>
> These explanatory systems are based on either a fundamental lack of knowledge of the abduction phenomenon or on a systematic disregarding of the disconfirmatory evidence within it…(Part 1, para. 1-2).
>
> As John Mack says, the phenomenon is what it is. All we can do is investigate and chronicle what is happening…and try to make sense of it…. The evidence clearly indicates that the aliens know exactly what they are doing (Part 3, para. 6, 8).

Jacobs joined the Temple faculty in 1975 and received tenure in 1981. He received Temple's College of Liberal Arts Distinguished Teaching Award in 1999 and the College of Liberal Arts Distinguished Advising Award in 2000. Jacobs is known beyond the Temple campus for his interest in UFOs rather than his expertise in history. He has succeeded at establishing himself as an expert on UFOs and alien abductions, by

publishing (popular) books, speaking at conferences, serving as a source for journalists, and being a "talking head" in what seems to be an endless series of television documentaries about UFOs and aliens. But his own list of publications does not include any papers on his UFO research published in mainstream academic journals. And an associate professorship at Temple is not equal to a full professorship at Harvard, credibility-wise.

"I am still Associate Professor," Jacobs notes. "There is a price to pay for academics when they enter into the field of UFO and abduction research and find positive, rather than negative, evidence for its existence."[19] Finally, Jacobs has earned nothing like a Pulitzer prize for his work. He has established his credibility among UFOlogists, and perhaps to some extent among journalists given his university position and his books. In a profile of Mack, the *Wall Street Journal* (Jefferson, 1992) cited Jacobs as an expert source on abduction, identifying him as the teacher of a course at Temple on UFOs in American society. The *Journal* article reported: "'Temple believes in academic freedom,' says Dr. Jacobs. 'Besides, I also have tenure, so there's not much they can do about it'" (p. A7).

In all of my searching for texts about Mack and abduction and for information on Jacobs and other academics and scientists involved in the public discourse on abduction I found no evidence that either scientists or journalists have publicly taken Jacobs to task, as they did Mack, for his research interests or even his use of hypnosis (a more questionable method for a historian than for a psychiatrist, in my own non-expert view). It may be

rather easy for scientists to ignore him since historians are humanists, not scientists.

David E. Pritchard, Cecil and Ida Green Professor of Physics at MIT, cochaired the 1992 MIT abduction conference with Mack. He also served as a moderator of a 1997 workshop on physical evidence related to UFO reports, organized by Stanford University physics professor Peter Sturrock (see Chapter 7). Pritchard earned his B.S. from the California Institute of Technology in 1962 and his Ph.D. from Harvard in 1968.[20] He is a principal investigator in the Molecular and Optical Physics Group in the Research Laboratory of Electronics. In 1999, he was elected to the National Academy of Sciences — a credential that, at least among scientists, outshines even Mack's Pulitzer. Pritchard has been a member of the MIT faculty since 1968. Various UFO web sites that I reviewed in the course of research for this project refer to Pritchard as a "UFOlogist" or "UFO Advocate." In its profile of Mack, the *Wall Street Journal* (Jefferson, 1992) reported Pritchard's opinion about an upcoming television miniseries on abduction: "'I think it's a disaster in the making,' adds David E. Pritchard, an abduction expert and physics professor at [MIT]" (p. A1). *Omni* magazine once identified Pritchard as "a scientist at the Massachusetts Institute Of Technology who believes scientists should look seriously at the abduction phenomenon" (Huyghe, 1995, n.p.). *Omni* reported that Pritchard had analyzed what was alleged to be alien implant removed from the body of an abductee and "agreed to analyze the 'implant' for one simple reason: 'Proving that life exists elsewhere in the universe would be the biggest scientific discovery of all time'" (Huyghe, 1995, n.p.). (*Omni* also reported that Pritchard found the alleged implant was made of common terrestrial materials.)

While Pritchard apparently has not denied having an interest in UFOs and abductions, his MIT Web page and biography include no reference to his involvement in the 1992 MIT abduction conference (along with Mack) or the 1997 UFO workshop or any interest in the subject of UFOs and aliens, although literature searches turn up his name as a coauthor of the proceedings of the conference, along with Mack. Mack cited Pritchard twice in *Abduction* (Mack, 1994a), for his involvement in the MIT conference and for his work on analyzing alleged alien implants (see pp. 42, 314). Mack's list of references in *Abduction* also include a chapter authored by Pritchard for the book *Experienced Anomalous Trauma: Physical, Psychological, and Cultural Dimension* (R. L. Laibow, B. N. Sollad, & J. P. Wilson, Eds., 1992, New York: Brunner/Mazel – see Mack, 1994a, p. 425). Pritchard apparently has chosen to maintain his scientific credibility by keeping himself situated comfortably within the boundaries of conventional science, a decision that appears particularly practical for a physicist….

The following chapter documents journalists' performances in the Case of the Deviant Doctor.

Notes

1. Information on Mack's education, experience and accomplishments was obtained from his *curriculum vitae*. Obtained from the Program for Extraordinary Experience Research, Cambridge, MA, March 1999.
2. In a review of *A Prince of Our Disorder*, the *Saturday Review* (Crain, 1976) judged the book "among the most comprehensive treatments of Lawrence's life to date. Cautious, at times almost to a fault, in the face of the controversies that still swirl around [Lawrence], Mack yet works adroitly and judiciously with the sundry conundrums of the Lawrence legend.... Although psychological probings in the writing of biography can often be outlandish and distorting, they are notably clarifying in Mack's hands" (p. 40). This review did not recite Mack's credentials or even mention that he was a psychiatrist or Harvard professor.
3. The American Psychiatric Association produces the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), widely held as the official "dictionary" of mental and behavioral norms and deviance.
4. PEER characterized itself as "a nonprofit...group that contributes to the scientific and philosophical exploration of experiences that do not fit our usual understanding of reality. The program takes on the scientific, yet inescapably social, challenge surrounding the study of reports of extraordinary experiences." (Source: PEER press kit, undated material, obtained from PEER, Cambridge, MA, March 1999.)

5. I obtained a copy of the original Scribner's press release from the Web site of the John E. Mack Institute. Retrieved August 9, 2004, from http://www.johnemackinstitute.org/passport/abduction_pressrelease.html.

6. The American Psychoanalytic Association, founded in 1911 and with a current (2005) membership of about 3,500, defines psychoanalysis in scientific terms, as "a general theory of individual human behavior and experience" and "a developmental theory…. It is, in addition, a method for learning about the mind" (n.p.). Information obtained from "Facts about ApsaA and Psychoanalysis,' January 31, 2001, retrieved April 19, 2005, from http://www.apsa.org/ctf/pubinfo/about/geninfo/facts.htm.

7. Harvard Medical School issued a statement on August 3, 1995, announcing the results of its review of Mack's "clinical care and clinical investigation." The contents of this statement were quoted in the *Skeptical Inquirer* (Emery, 1995c). Harvard Medical School's "Principles and Procedures for Dealing with Allegations of Faculty Misconduct" — retrieved February 20, 1998, from http://www.hms.harvard.edu/integrity/miscond.html — stress:

> The importance of the Faculty's maintaining standards consistent with the highest traditions of teaching, patient care, and research...the responsibility of the Faculty to the public and the scientific community...[and] the necessity of the Faculty's protecting the rights and reputations of all individuals, including the person who is alleged to have engaged in misconduct (n.p.).

The policy dictates that the school's Dean, in consultation with its Committee on Faculty Conduct, may, "if there is a dispute over facts or for other good cause," appoint a panel of inquiry "to inquire into the facts." The policy defines "misconduct in science" as "fabrication, falsification,

plagiarism, or other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting or reporting research" (n.p.). Misconduct, according to this policy does "not include error or honest differences in interpretations or judgments of data" (n.p.).

8. Mack told me about his decision to decline interviews in his 1999 interview with me (see Appendix B).
9. Unless otherwise cited, I obtained information on Mack's speaking engagements with fringe groups from newsletters of Mack's Program for Extraordinary Experience Research (*PEER Perspectives*, Volume 1, No. 1, Summer 1996; No. 2, n.d.; and No. 3, n.d.; hard copies obtained from PEER, Cambridge, MA, March 1999) and from PEER's Web site (retrieved August 9, 2000; and November 2, 2000; from http://www.peer-mack.org/news.html). I have not included calendar listings and other briefs from the *PEER Perspectives* newsletters in my list of references as these articles were not bylined and they appeared in issues that were not dated and paginated.
10. Harvard Medical School's Department of Psychiatry newsletter, issue No. 3, Volume 3, October 1996, reported that Mack received an award for "contribution to the Advancement of New Science" from the International Association for New Science. Issue No. 2, Volume 3, June 1996, reported that Mack had "authored a best-selling book about anomalous experiences." Newsletters obtained from PEER, Cambridge, MA, March 1999.

11. Information on the multidisciplinary workshop was obtained from an issue of the newsletter *PEER Perspectives*, No. 3, pp. 1, 12-14. Newsletter obtained from PEER, Cambridge, MA, March 1999.

12. Personal communication, PEER staffer Will Bueche, November 3, 2000. Bueche told me via email that the publisher of Passport… apparently had not invested much effort in promoting the book and that Mack had not been too concerned about publicity for it. Additional information on reviews of *Passport*… was obtained from the Web site of the John E. Mack Institute, accessed on the World Wide Web August 9, 2004, at: http://www.johnemackinstitute.org/passport/blurbs.html.

13. I retrieved the transcript of the SCI FI Channel chat November 21, 2002, from the archives link at http://www.scifi.com. (The transcript is now available at: http://www.scifi.com/transcripts/2002/drjmack1023.html). The transcript was not paginated, and it was formatted in question-and-answer form; thus in citations to the transcript I have provided answer numbers rather than paragraph numbers.

14. Stout, C. E. (ed.) (2002). *The Psychology of Terrorism: Volume I, A Public Understanding*. Westport, CT: Praeger Publishers. Citation obtained from Mack's online c.v., retrieved April 13, 2004, from http://www.johnemackinstitute.org.

15. Mack, J. E. & & Jamieson, S. (2003). Shamanic journeys and UFO encounters: a consideration of two avenues to an expanded reality. *Shamanism: the Journal of the Foundation for Shamanic Studies, 16(1).* Citation obtained from Mack's online c.v., retrieved April 13, 2004, from

http://www.johnemackinstitute.org.

16. Personal communication (email), Will Bueche (former PEER staffer, currently with the John E. Mack Institute), May 16, 2005. Specific PEER research projects also received some grant funding from various foundations and organizations such as the Fetzer Institute and the National Institute for Discovery Science. Projects included a study of "Personality Differences Related to Reports of Anomalous Experiences Commonly Called Alien Abduction" and a "Multiple Witness Study" ("Comparative Narrative Reports of Multiply Witnessed Anomalous Experiences Commonly Called Alien Abduction"). Costs for specific projects and for the PEER project as a whole were not provided.

17. I retrieved Mack's statement and other information on the conclusion of his PEER project from the Web site of the John E. Mack Institute (JEMI), http://www.jemi.org, on August 30, 2004. (The URL for this Web site is now http://www.johnemackinstitute.org.) Mack served as chair of JEMI, an outgrowth of the Center for Psychology and Social Change, which he founded in 1982. On its Web site JEMI states that it is dedicated to "exploring consciousness and transformation" and aims "to apply emerging knowledge to pressing psychological, spiritual and cultural issues."

18. I retrieved information about Jacobs on November 17, 2004, from a Web site maintained by Jacobs himself, http://www.ufoabduction.com. I have used information from the pages titled "home," "biography," and "articles" (not dated or paginated). Jacobs provides some details about his interest in and publications

on UFOs on his official Temple University Web page as well (see http://www.temple.edu/history/jacobs.html).

19. Personal communication, April 24, 2005 (Jacobs gave me information on his tenure and awards at Temple by email).
20. I retrieved information about Pritchard on November 17, 2004, from his own official MIT Web page, http://rleweb.mit.edu/rlestaff/p-prit.htm (not dated or paginated).

Chapter 5

The Case of the Deviant Doctor: journalists weigh in…

As explained in Chapter 1, media coverage of Mack's abduction research unfolded through the 1990s, a decade of so-called science wars and memory wars and continued popular interest in UFOs and alien visitations. The range of media texts examined for this analysis show how journalists rhetorically employed their own professional conventions, and how they interpreted and deployed what they perceived to be the conventions of science, to participate in the social process — the symbolic action — of boundary-work. In "The Case of the Deviant Doctor" Mack appeared on stage as a scientific authority, and journalists appeared onstage as observers, chroniclers, and commentators, variously attempting to construct or deconstruct Mack's credibility and authority. The drama opened with the 1992 MIT abduction conference co-chaired by Mack, arguably the highest-profile academic event of its kind. It depicted the publication of *Abduction*, reactions to it, and Mack's reaction to the reactions. And it apparently came to end without a satisfying conclusion.

My initial close reading of a select group of the media texts I found on Mack's abduction research convinced me that the stories were overtly critical and negative.[1] But, as Shoemaker and Reese (1996) reported, "Empirical evidence shows...most news content is

neutral" (p. 43). And journalistic conventions call for objectivity, balance and fairness in reporting the news (ibid.; Gans, 1979; Schudson, 1978, 2003; Tuchman, 1978). These stories thus appeared anomalous to me, and I decided to dig deeper into them. Deeper examination revealed that these apparently biased stories also appeared to be carefully structured in accordance with journalistic conventions of objectivity, balance, and fairness. Indeed, when picked apart sentence by sentence, word by word, many could be fairly described as consistently neutral in overall content.[2] The seeming dissonance between structure or framing and actual content, especially the possible meanings of content, signaled to me that whatever was going in this case was worth exploring in greater depth. Following these preliminary assessments and further searching for more texts, I sorted all the stories I collected into chronological groups, as described below, in order to consider how various events in the Mack abduction research story drove media coverage. The stories sorted out into the following "acts" (see Chapter 4).

Act I, "The doctor is an expert," covered the period from February 1983 (the approximate beginning of the Lexis-Nexis database, according to the company) through February 1994 (the month before media coverage of *Abduction* began). I found 26 stories published in this period citing Mack as an expert (for example, on nightmares and trauma), a scientific authority (for instance, founder of the Association for Political Psychology), and even a peace activist. All of these stories identified Mack as a Harvard psychiatrist or professor. Though Mack began his abduction research in 1990, I found no stories in the mainstream media connecting Mack with abduction research published before May 1992. I found no texts on abduction authored by Mack dated before 1992. In

June 1992, the MIT conference on abduction research, cochaired by Mack, took place. Around the time of the conference, the *Wall Street Journal* (Jefferson, 1992) and the *Boston Globe* (Chandler, 1992) ran stories about Mack's involvement in abduction research. Later that year the *Boston Globe* profiled Mack in its Sunday magazine (Tery, 1992), and over the next year Mack and his abduction research were featured in a few other mainstream media such as *Newsday* (Falk, 1993), *USA Weekend* (*USA Today)* (Kuznik & Vega, 1993) and *Time* magazine (McDowell, 1993).

The action in Act II of our drama, "The doctor steps out on a limb," commenced in March 1994, when media coverage linked to the April 20, 1994, publication of *Abduction* began, and concluded in December 1995. In the spring of 1994 Mack participated in a publicity campaign for *Abduction* that generated extensive coverage in mainstream newspapers and magazines including the *Boston Globe* (Kahn, 1994) and *Boston Herald* (McKenna, 1994), *Psychology Today* (Neimark, 1994), *The New York Times Magazine* (Rae, 1994), *People* (Rosen, Podolsky, & Brown, 1994), and *Time* (Willwerth, 1994). The campaign also landed him on television with Larry King, Charlie Rose, Oprah Winfrey, and the Cable News Network's "Crossfire" team, among others, a development reported in some of these stories. (I reviewed transcripts of these TV appearances, but I have not used them in this analysis because I have limited this study to print media, as explained in Chapter 3.)

Act II also encompassed Harvard Medical School's investigation of Mack's abduction research methods (see Emery, 1995a), initiated after the release of *Abduction* and

completed in August 1995. A mass-market paperback edition of *Abduction* came out in 1995, with revisions by Mack responding specifically to media criticisms. In May 1995 Mack broke a self-imposed embargo on media interviews by holding a teleconference call with reporters, prompting a few stories, including reports by the *Washington Post* (Daly, 1995), Reuters (Emery, 1995b), the *Boston Globe* (Grunwald, 1995) and the *Boston Herald* (Weber, 1995). More stories followed when the medical school announced the results of its investigation, in publications ranging from *The New York Times* (Honan, 1995) and the *Los Angeles Times* (Thompson, 1995) to the *Skeptical Inquirer* (Emery, 1995c). Another story in the *Boston Globe* (Beam, 1995) was prompted a month later by the alleged leak of a letter from the dean of the medical school to Mack, reportedly sent in addition to the official report of the investigation and more harshly worded.

Act III, "The expert's authority at risk," covered events from January 1996 through October 2003.[3] Through this period, Mack continued to speak and write about his abduction research (see Chapter 4), prompting occasional mainstream news reports such as a story in the *San Francisco Chronicle* about a talk Mack gave in one of the city's suburbs (King, 1999). In 2000, Mack published his second book on abduction, *Passport to the Cosmos* (Mack, 2000a). In October 2003, Mack's Program for Extraordinary Experience Research (PEER) concluded.[4] What follows is a roughly chronological account of reporting on Mack's abduction research, capturing journalists' rhetorical responses to Mack's idiosyncratically "scientific" rhetoric. Throughout this account I will make occasional parenthetical references to the journalistic values, practices, and

conventions described in Chapter 2 as they are reflected in the texts, toward characterizing how these stories are constructed, although at any given point in a story multiple values, practices and conventions may be reflected.

Act I, "The doctor is an expert": expertise, authority, deviance…

Act I of our drama began with Mack appearing onstage as an expert and authority. Before 1992, when Mack began to talk about his abduction research, journalists occasionally turned to him as an expert source or scientific authority, always mentioning his Harvard affiliation. *The New York Times* cited Mack in a story on the psychological effects of nuclear war on children (Bruckner, 1985): "among the best-known studies" of the psychological effects of fears of nuclear war on children "is that of Dr. John Mack, a psychiatrist at the Harvard Medical School, and some colleagues" (p. 24). In a similar story, *Science News* (Bower, 1985) cited Mack and three other Harvard researchers as expert sources. Mack himself coauthored an op-ed for *The New York Times* on disarmament (Coles & Mack, 1985). The *Los Angeles Times* reported that "Harvard psychiatrist" Mack delivered the opening address at a local peace conference (Hendrix, 1986); the paper also reported Mack's arrest in a nuclear weapons protest at the Nevada Test Site (Record 149 arrested, 1986). The *Chicago Tribune* cited Mack as an expert on nightmares (Hand, 1988): "John Mack, a psychiatrist at the Harvard Medical School, has written that schizophrenic patients often describe periods of being immersed in a world in which boundaries between reality, fantasy, illusion and hallucination are lost" (p. C1). In a story on why people "love to hate," *Newsweek* (Gelman, 1989) cited Mack as a Harvard expert on the subject. In a story about political psychology, *The New York Times*

(Goleman, 1991) quoted Mack as an expert on that subject: "'When someone has immense political power, he transcends any psychiatric label you might give him,' said Dr. John Mack, a psychiatrist at Harvard Medical School and a founder of the International Society of Political Psychology" (p. C1). In a story about California's Esalen Institute, the *San Francisco Chronicle* (Carroll, 1991) identified Esalen as "a touchy-feely New Age spa and psycho-babble conference center" (p. 83), but it cited Mack more soberly, as a Harvard psychiatrist and "president of the International Society of Political Psychology" (elite and official source), who reportedly described Esalen as a pioneer in U.S.-Soviet relations. None of these texts questioned or criticized Mack's views. All of these stories cited Mack's Harvard affiliation.

Harvard Magazine (Lambert, 1992) was apparently first to report on Mack's abduction research, in 1992[4], pegging its article to an upcoming CBS TV miniseries on abduction featuring a character modeled on Mack. Dubbing abduction a "strange phenomenon" and "an authentic mystery," this story reported "no theory that jibes with our current understanding of the universe can explain these occurrences" (p. 6) and "nothing in the experiencers' lives or mental makeups [can] justify an explanation based on psychopathology" (p. 7). Stories about Mack's involvement in abduction research also began to surface in elite mainstream media. Like *Harvard Magazine*, the *Wall Street Journal* (Jefferson, 1992) made Mack's abduction research timely news by reporting on it in conjunction with the airing of the miniseries (timeliness), described by the *Journal* as a story "about a psychiatrist…who helps people overcome the trauma of abductions by extraterrestrials" (p. A1). (The miniseries was broadcast in May 1992, a month before the

MIT abduction conference.) The *Journal* article was entitled "A Harvard doctor offers trauma relief for UFO 'abductees': extraterrestrials play rough, so there are many injuries for John E. Mack to heal." "More sensational fantasy lifted from supermarket tabloids?" the story asked about Mack's claims; "not quite" (p. A1). Mack was quoted on abductees: "'These are people who have no reason to lie'" (p. A1). This story claimed Mack's career had been "peppered with projects that aren't in the mainstream" (p. A7). Malkah Notman, then acting head of Harvard's psychiatry department at Cambridge Hospital (official source, balance), was quoted about Mack's research: "'Many great ideas sound offbeat at the beginning.... There is some concern, but…I think the department feels it's useful to encourage creative work, as long as it doesn't get in anybody's way or do any harm'" (pp. A1, A7). (Notman would later pass tougher judgment on Mack's abduction research in *The New York Times Magazine* (Rae, 1994).)

The *Journal* article displayed what would soon become a familiar structure for stories about Mack's abduction research, following standard journalistic conventions: a grabby headline including "Harvard" (official, elite) and "aliens" (unusual), an engaging lead describing an abduction experience (human interest, entertainment), a description of the news — who-what-when-where: a Harvard expert is now studying abductees (controversy), a reporting of a range of expert opinions on the news (balance, official sources), the views of the news maker (fairness, official source), and sometimes a conclusion that hinted at things to come. The *Boston Herald* ran a news brief on Mack's abduction research shortly before the MIT conference (Meyers, 1992), reporting that, "aside from being a professor at Harvard…[Mack] is a highly regarded writer, having

won a Pulitzer Prize" (p. 7). The *Boston Globe* reported on the MIT conference (Chandler, 1992) as local news (proximity) and science news, citing the involvement of Mack, a local and a scientist (official source).

A few months after the MIT conference, the *Boston Globe* profiled Mack in its Sunday magazine (Tery, 1992). Ambiguously titled "Alien territory," this story gave Mack plenty of space to tell his story his way (fairness), from the evolution of his thinking about abduction from skeptical to "fascinated" to the reinforcement of his authority and credibility. Mack was quoted: "'I trust myself, clinically...it's a question of clinical judgment…I've spent most of my professional life...learning to make clinical psychological discriminations'" (p. 23). Mack was also quoted identifying his interests: "'this has all kinds of implications for our scientific world view, for our identity as a species'" (p. 23). The story addressed Mack's methods in a conventionally balanced way: hypnosis is "a practice criticized by disbelievers but defended by Mack as an important tool for uncovering repressed information" (p. 23).

This story also depicted Mack as a stereotypically heroic scientist (human interest), a man of "convictions," working "at the front lines of…research" (pp. 20, 23). The story cited only one other expert (balance, official source), a self-described "agnostic" Harvard colleague. The sexual aspects of abduction accounts (unusual, human interest, entertainment) were addressed in the middle rather than the lead of the story, with the qualifying statement that "Mack is well aware that the [abduction] stories stretch the bounds of credibility" (p. 24). The story made a link between Mack's abduction research

and the stuff of supermarket-tabloid stories, with their "outrageous headlines" about "Elvis sightings" and "the Abominable Snowman" (pp. 24, 25) as well as alien visitations, an association that was not played out further in this story but would reappear in other texts. The *Globe* story also informed readers that "Mack tends to turn down interview requests, because he believes too many reporters trivialize or sensationalize abductee cases" (p. 23). Mack was quoted making an assertion that he would consistently repeat in talking about his abduction research: "'If we can be in that place of not knowing…we're likely to learn more than if…we close our minds and try to keep this under control'" (p. 24).

Perhaps most significantly, at least for this analysis, a terminology of spirituality surfaced in the *Globe* piece that would resurface often in other stories: "'I have a kind of faith'" (p. 25), Mack was quoted about his abduction research. "Disbelievers" and "doubters" were mentioned; a colleague of Mack was quoted saying that Mack had led "'a lot of believers…to think again"; the colleague described himself as "'somewhere between being a disbeliever and an agnostic'" (p. 27).

A 1993 story in *USA Weekend* (published by *USA Today*), "Abducted by aliens? Carried away?" (Kuznik & Vega, 1993), cited Mack as a Harvard expert (official source) sympathetic to alleged abductees (human interest). *Time* reported in a 1993 story on abduction, "It came from outer space" (McDowell, 1993), that "Mack...takes the [abduction] stories seriously" (p. 56). In a 1993 feature entitled, "That alien feeling: why, ask true believers, would thousands of men, women and children fantasize such strange,

unpleasant and strikingly similar experiences?", *Newsd*ay (Falk, 1993) reported, "Once...grist for the supermarket tabloid mill," abduction accounts "have become so common...that academics and psychologists are debating their significance" (p. 4) (controversy). This story opened with an abduction account — "As Joseph came around a corner of a darkened road…his car was enveloped in a sunburst of blue-white light…" (p. 44) — and then went on to describe Mack's involvement in abduction research, make the supermarket-tabloid link, and report the opposing views of "the camp of the True Believers," "the legion of skeptics," and "the camp of the debunkers" (p. 4) (balance, conflict). In this story Mack was reported to dismiss debunkers (fairness, conflict) as "unqualified to diagnose his patients at a distance...scientifically insincere"; he was quoted, "'These are not scientists.... They are ideologues, defending a fixed notion of reality'" (p. 4).

Act II, "The doctor steps out on a limb"

Scene I, Lighting and fighting firestorms —

the book and reaction to it

Before the publication of *Abduction* (Mack, 1994a), as previously noted, Mack had established a record of willingness to talk about his work with public audiences by way of the mass media. With the book's release came plenty of media opportunities, and plenty of commentary from scientists tapped by journalists as sources. "Disputes among scientists," as Dearing (1995) noted, "sometimes encourage journalists to 'play' with stories and write tongue-in-cheek reports" (p. 342), and once *Abduction* came out, journalists started to play with Mack's story. They continued to employ the familiar story

structure described above, but they began to embellish it, leading with accounts of alien sex, physical probes, bodily implants, and hybrid babies and emphasizing the sexual aspects of abduction stories (unusual, entertainment).

Headlines for stories published from spring 1994 through 1995, encompassing the publication of *Abduction* in hardcover (Mack, 1994a) and paperback (Mack, 1995), typically mentioned Harvard, aliens, and sex. In keeping with conventional news values, stories were timely, pegged to the book's publication, for example, or Harvard Medical School's investigation. Reporters homed in on Mack's use of hypnosis and its association with the controversial idea of repressed and recovered memory and began citing more experts who were skeptical or critical of Mack's abduction work. And even though journalists were reporting on Mack's research because he had published a book about it — the book was, ostensibly, the news — their stories were critical of Mack for publishing the book. It appeared that Mack was being penalized for publishing his research results in a popular medium instead of a peer-reviewed journal, for seeking publicity, and for collaborating with the mass media. Stories typically concluded with last words from either Mack or an abductee or both, closing on a somewhat hopeful note and leaving an opening for a followup.

Dearing (1995) examined how journalists cover maverick scientists and maverick theories in such a way as to transform them into scientific controversies, in the process constructing them as credible. Dearing defined his terms thus:

> *Maverick science* is unorthodox scientific theory which is believed as credible by only one or a few scientists. A *maverick* is an outspoken proponent of unorthodox

> scientific theory. *Mavericity*, the property of making unusual associations in ideas and of doing the unexpected, is a cherished entrepreneurial trait [emphasis in original] (pp. 343-344).

Following the journalistic conventions of objectivity, fairness, and balance, Dearing said, reporters may attempt to cover a range of scientific opinions, but they also may pay "more attention to criteria that may heighten the newsworthiness of a scientific controversy" (p. 341). The resulting stories often "resemble 'David and Goliath' struggles, with a seemingly bright go-it-alone scientist bucking an intransigent, conservative scientific establishment, whose representatives subjectively attack the personal credibility of the maverick" (p. 344). Beneath the journalistic veneer of a "good science-bad science?" story, coverage of Mack's abduction research appeared to fit the pattern Dearing described, though in this case journalists tended to frame Mack as not just seemingly bright but, as one of them put it, "one of the best and the brightest" (Neimark, 1994, p. 46).

In his exploratory content analysis Dearing (1995) focused on cases of scientific controversy involving public risk and uncertainty. In the Mack case, though some critics claimed his abduction research posed a public risk, the threat his work presented was to the conventional scientific worldview. Reacting to Mack's claims, some members of the scientific elite, such as Richard Ofshe (see Chapter 1) — and a few members of the journalistic elite, such as former *New York Times* science writer James Gleick (1994) and *Boston Globe* critic Milo Miles (1994) (see below) took rhetorical steps to defend what they perceived to be the boundaries of proper science.

"The Harvard professor and the UFOs; alien abductions"

In its March 1994 issue, preceding the release of *Abduction* (Mack, 1994a), the magazine *Psychology Today* published a 5,000-word feature by this title (Neimark, 1994) about Mack and his abduction research, emphatically situating them both inside what was then a rather heated public controversy over repressed and recovered memories. This story contained more information about Mack's scientific training, experience, practices, and worldview than any other text examined for this analysis, suiting it to the magazine format and this particular magazine's audience. *Psychology Today* framed Mack as a legitimate, authoritative researcher and his abduction research as controversial research.

Spiritual terminology was deployed prominently in the first 100 words of this story, where Mack was introduced as a man who had "made himself into a high priest" and become a "paterfamilias and healer" (para. 1). Mack was said to be "seeking God" (para. 1), and abductees were said to be "spiritual seekers" (para. 3) who "flock to him" (para. 2). The story later described Mack as a "high priest at a most sanctified temple of science…with a halo of perfection about him" (para. 32). This story described but did not dwell on the sensational details of abduction stories (unusual): "buried memories" (para. 3), "kidnappings" (para. 5), "intergalactic hybrid-breeding…sperm and egg samples taken, alien fetuses implanted and removed, and probes inserted" (para. 2). Mack was quoted: "'Some other intelligence is reaching out to us. It's the most exciting work I've ever done.... I'm shocked…to hear myself saying such things, But I've been as careful as possible to exhaust conventional explanations'" (para. 4).

Psychology Today singled out Mack's use of hypnosis to "recover buried memories" (para. 2) as a weakness of his research and made it a primary focus of the story (controversy). This story included blunt criticisms from psychologist Richard Ofshe and psychiatrist Fred Frankel (official sources, balance) and also a claim Jill Neimark, the journalist who wrote the story, identified as her own[5], that Mack was "stunningly" biased: "the issue is not whether Mack is right or wrong, but that he has abdicated scientific objectivity" (para. 49). Neimark further observed that "perhaps the most interesting aspect of [Mack's abduction research] is not whether it is valid, but the intense furor surrounding it" (para. 58) — a point that would be echoed in other stories about Mack. This story concluded:

> The jury on UFOs may forever remain out.... When Mack says this phenomenon gets at the very core of 'who we are' and 'makes us question all realities,' he is right…. Ours is an age of rockets and radio waves, an era mesmerized by the pleasures of purging and confession, caught by the belief in widespread abuse, and both troubled and inspired by questions of consciousness itself. If anyone is an emblem of our age, John Mack is. The real disappointment is that he brings us no closer to the truth — even though he could (para. 59).

On March 20, 1994, *The New York Times Magazine* published a 3,300-word feature about Mack (Rae, 1994) that in its first 200 words established itself as an account of a scientific authority's pursuit of boundary-violating work. In contrast to *Psychology Today*'s, *The New York Times Magazine*'s story began with an attention-grabbing, first-person abduction account, a type of lead that would be replicated in later reports on Mack: "'I didn't realize I was having sex with aliens until just a few months ago'" (para. 1), the story began, quoting an alleged abductee (unusual, human interest, entertainment). This and other abduction experiences were reported to involve "anal probes and forced sperm-taking…artificial insemination and removal of embryos," and "nonstop" sex (para.

3). With the stage set for sensationalism, Mack was then introduced as "a Pulitzer Prize-winning Harvard psychiatrist" and "Freudian psychoanalyst" (official source, prominence) whose interest in abduction stories, "and the book he was writing about them, would not have caused a stir. Except that he believed them" (para. 4-5). While "there have been a spate of books" about alien abduction," this story reported, there have been "none by an author with the credentials of John Mack" (para. 6). Early on, the story declared it a "given" that *Abduction* was "likely to obscure all [Mack's] past accomplishments" (para. 11).

Like *Psychology Today* (Neimark, 1994*)*, the *Times Magazine* presented the idea that false memories can be implanted during hypnosis, claiming one of Mack's abductee clients was "enlightened...by an alien who sounds just like Mack" (para. 25) (skepticism). But this story did not dwell on the hypnosis/false memory issue, instead focusing on Mack's character, and even addressing his sanity:

> Colleagues...feared their beloved professor had gone mad…people thought Mack was crazy…. A straight-ahead guy who passed up the chance to take LSD in the 50's...Mack had sat out the 60's drugfest. He made up for that now (paras. 8, 16).

The story reported (without attribution) that "Mack is increasingly being compared with Timothy Leary, who gave LSD for homework and was dismissed from Harvard in 1963" (para. 29) (controversy). But it also noted, "Clearly, Mack was anything but nuts" (para. 8). Mack's interests were further explored:

> [He] cut a quixotic figure.... [His] quest led him down what are considered heretical paths...this prominent member of the Boston Psychoanalytic Society and Institute questioned psychoanalysis.... Mack found est...plunged into Eastern philosophy and shamanism...read Huxley's 'Doors of Perception' and Castaneda's 'Teachings of Don Juan' [and] emerged from these explorations

> possessed of the notion that humanity's present predicament was rooted in…Western dualism...and...materialism.... So Mack was predisposed to seeing entities (paras. 12, 13, 15-18).

The story cited other experts on Mack's research:

> 'Nobody believes it,' snaps Dr. Malkah Notman…Mack's boss. 'I wish he were doing something else. This is so off-base'.... Notman gives the clear impression she would rather be swallowing glass. 'I think it's part of an ongoing search that he's had for issues he defines as spiritual,' she ventures sympathetically (para. 28) (official sources, balance).

UFO debunker Philip Klass (see Chapter 7) was quoted on Mack's persuasiveness: "'I would almost buy the Brooklyn Bridge from him'" (para. 32). An anonymous "friend" of Mack was quoted: "'We're terribly concerned that he is hurting himself, his patients and psychiatry'" with his "'obsession'" (para. 31). The story reported that this friend raised "the specter of Wilhelm Reich, the psychiatrist whose notions about orgone energy destroyed his career" (para. 31). Astronomer Carl Sagan, described as "an old friend" (para. 33) of Mack, was quoted: "'I tried to argue that...extraordinary claims demand extraordinary evidence.... And John would have none of that'" (para. 34). Another anonymous source was quoted about Mack: "'He really is...a do-gooder'" (para. 11); the story added that Mack had "always [been] a seeker" (para. 11) as well (fairness, balance). Approaching a conclusion, the story reported, "His friend was kind. Others will be less so. But Mack is almost mystically detached and certain that he is right" (para. 37).

In an interview with *Publishers Weekly* (Daniel, 1994), Mack was reported to have "defend[ed]...himself against those who have said that [he]...has succumbed to the lure of sensationalism and big money with *Abduction*" (para. 1). This article, tailored to the

audience of the magazine, reported on Mack's efforts to get the book published and on the content of the book itself — characterized as featuring "an astonishing amount of sex with aliens" (para. 2). Mack was quoted, "'This book touches some kind of nerve…publishers realize that a Harvard professor is going out on a limb...putting my credentials on the line, and that's saleable'" (para. 8). Mack was further quoted doing some boundary-work in this story, declaring his work legitimate science:

> 'We are on the edge of some kind of real advance in science, in knowledge of ourselves and the universe, and the culture senses this.... There is even a sense in some of the scientific community that we may be on the edge of a shift in world view that is open to a larger reality' (para. 10).

About his critics, Mack was quoted in *Publishers Weekly*: "'We don't kill people anymore for unpleasant messages. We try to attack their reputations'" (para. 11). And he was quoted on the politics of science: "'A kind of political restriction has been imposed on our ontology by whoever decides what's real in a culture — a mix of scientific, political, religious and media elite'" (para. 9).

Abduction (Mack, 1994a) was reviewed in major magazines and newspapers. The *Boston Herald* (Dykes, 1994), *Los Angeles Times* (Dewan, 1994), and *San Francisco Chronicle* (Berry, 1994) took the book seriously. *The New York Times Book Review* (Gordon, 1994) critiqued but did not dismiss the book or the abduction phenomenon, and its reviewer credited Mack with performing "a valuable and brave service" by writing *Abduction*. *Newsweek* (Plagens & Bryant, 1994), the *Washington Post* (Rucker, 1994). and the *Boston Globe* (Miles, 1994) published negative reviews. *The New Republic* (Gleick, 1994) ran a feature-length screed in the form of a review of *Abduction*, excoriating Mack

for flouting the conventions of science and for sloppy writing and thinking as well. Other newspapers and magazines pegged news reports on Mack and his abduction research to the publication of the book.

"Aliens attempt to save Earth!"

Under this headline freelance writer Susan Dewan (1994) wrote in her review for the *Los Angeles Times* that *Abduction* was "not fiction" and "not quite fact" but rather "about the unknown or the unknowable…a challenge to any reader" (p. BR13). "This provocative work," providing "thoughtful documentation" of abduction cases, "should not be judged in a debate over whether UFOs and their alien crews are 'real'," Dewan wrote (p. BR13). The book "raises questions about how we live on this planet" and "opens the door to a very serious redefinition of life as we know it" (p. BR13). The *Boston Herald* characterized *Abduction* as a book about "close encounters of the spiritual kind" (Dykes, 1994, p. 46) in the headline for its review. *Herald* reviewer Steve Dykes (1994) wrote that the book was "extraordinarily rich and strange…disturbing...threatening [and] mind-expanding," and he deemed it "the book of the season...a transcendent, landmark work" (p. 46).

On the West Coast, the *San Francisco Chronicle* headlined its review of *Abduction* "A disturbing look at 'alien abductions'" (Berry, 1994). The review was written by Michael Berry (1994), a reviewer of science fiction and fantasy books for the paper. Berry

opened his review by observing, “The idea of alien abductions runs so counter to the beliefs of most people that the very mention of the subject often produces eye-rolling jokes about the fate of Elvis Presley” (p. E5). But he did not dismiss Mack’s book. Echoing Dykes, Berry called *Abduction* “strange and disturbing” (p. E5), and he wrote that what distinguished *Abduction* “from the aliens-among-us nonfiction pack [was] the lack of sensationalism in Mack’s presentation” (p. E5). Berry wrote that Mack’s discussion of “the metaphysical aspects of abduction” made the book worth reading. “Something — even if only a form of mass hysteria — is powering this rash of abduction claims,” Berry concluded, “making it worth...serious investigation” (p. E5).

“Irresponsible, dangerous claptrap…”

Back on the East Coast, science fiction author Rudy Rucker (1994) reviewed *Abduction* for the *Washington Post*’s *“*Book World.” Like Berry (1994) and Dykes (1994), Rucker called *Abduction* “disturbing.” But Rucker gave the word a different meaning in this review, as he went on to explain that he was disturbed to find that the book was “irresponsible, dangerous claptrap” (p. X2). Rucker began his review, “As a science fiction writer, I am predisposed to enjoy such things as psychotronic space-invader films, crazed saucer cults and the modern pop myth of UFOs. But with...*Abduction*, ufology has reached a vile new low” (p. X2). Rucker claimed Mack “brings a hard-eyed huckster’s zeal to his trade” (p. X2). He said “the emphasis on sex” in *Abduction* was “icky and pervasive” (p. X2). *Abduction* should be funny, he wrote, but instead it was “written with the complete lack of humor characteristic of the true believer. And what makes the book very actively unfunny is the feeling that Mack’s procedures may be really

damaging...subjects" (p. X2), Rucker asserted, referring to Mack's attempts to help clients recover repressed memories. "I love the idea of UFOs, and *Abduction* drags this idea into the mud," Rucker concluded; "UFOs should be a witty and inspiring notion, but in [Mack's] hands, UFOs become boring and above all humorless" (p. X2). *Newsweek*'s review (Plagens & Bryant, 1994) was shorter but not much kinder. Headlined "Invasion of the body snatchers," *Newsweek's* take on the book began with the claim, "Scientists are hard-line skeptics. Only after failing to debunk...do they accept the evidence. But in *Abduction*...Mack makes only a cursory pass at disbelief before buying the idea" (p. 79). *Newsweek* concluded its critique, "If we ever do accept the existence of alien body snatchers, it will be in spite of Mack's book, not because of it" (p. 79).

"Are you reading this, aliens?"

Under this headline, physics professor and science writer Chet Raymo (1994) wrote about Mack and his book in his April 11 "Science Musings" column for the *Boston Globe*. Raymo reported that he had linked stories of alien abductions with "the witchcraft hysteria of the late-Middle Ages" in a previous column, speculating that "the cause of the abduction reports may lie…in the mysterious complexities of the human psyche" (p. 28). He said "John Mack called me up [about it] and we had a chat. He is thoughtful and sincere, and I liked him immediately. Of course, neither of us convinced the other of the correctness of our views" (p. 28). Mack rejected "psychological explanations" for abduction, Raymo wrote, and claimed "the reason many scientists...are unsympathetic to his evidence is that we [scientists] are not open to explanations that run counter to conventional wisdom" (p. 28). Raymo concluded:

> He's right. We should 'run counter' only when we need to; that's the essence of science. Mack, of course, thinks the time is now. However, I insist on more convincing evidence…. I doubt if anyone will show up to spirit me away — but I'm prepared to be astonished (p. 28).

"The man from outer space:

Harvard psychiatrist John Mack claims that tales of UFO abductions are real.

But experts and former patients say his research is shoddy"

Under this headline*, Time* magazine published a story about Mack (Willwerth, 1994) in its April 25 issue. Billed as the product of investigative reporting, the story — which would be cited in a number of subsequent texts about Mack and *Abduction* — opened with a quote from an alleged abductee with "troubling memories and wondering where to go for help": the man was quoted, "'I saw this article in the newspaper about Dr. Mack. And I thought if you can't trust a Harvard professor, who can you trust?'" (para. 1). The story thus established Mack as an expert and authority — that is, someone to be trusted — and then it went on to question whether Mack deserved that trust. In this story Mack was depicted as both an insider (Harvard psychiatrist) and an outsider ("from outer space") and also "more than a Harvard professor," a Pulitzer Prize winner and "noted scientific advocate of environmental and antiwar causes" (para. 2). Like *The New York Times Magazine* (Rae, 1994), *Time* reported "Mack believed every word" (para. 2) of abductees' stories. *Time* reported that "UFO believers" deemed *Abduction* "the most important step yet in scientifically validating" (para. 3) the phenomenon and that "psychologists and ethicists" were questioning not Mack's sanity but "his motives and methodology" (para. 4).

At the center of *Time*'s story, and apparently a reason why some other reporters cited it in their stories, was an account of a so-called "undercover debunker" (para. 5) named Donna Bassett, who told *Time* about "her life in the UFO cult" (para. 10) posing as an abductee, joining Mack's research project, and fooling him, she claimed, with made-up abduction stories. *Time* reported Bassett's claims that "Mack's work was riddled with scientific irregularities...[and] lacked a formal research protocol as well as legally required consent forms that advise potential research subjects about potential risks" (para. 5). The story claimed "Bassett's account is supported by others who had close encounters with Mack" (para. 11), and it identified one "other" by name. Like *Psychology Today* (Neimark, 1994), *Time* cited psychologist and repressed-memory debunker Richard Ofshe and Harvard psychiatrist Fred Frankel as experts on hypnosis and reported their criticisms of Mack's use of the technique and of the idea of repressed and recovered memory. *Time* reported that Mack "declined to discuss [Bassett's] case" and quoted Mack saying "'the attacks on hypnosis didn't begin until it began to reveal information that the culture didn't want to hear'" (para. 15).

But in the end, even this critical story closed on a hopeful note (balance, fairness). "Mack's view of the UFO phenomenon reflects a larger philosophical stance," *Time* observed, concluding with a quote from Mack to explain that stance: "'The world no longer has spirit, has soul, is sacred. We've lost all that ability to know a world beyond the physical...I am a bridge between those two worlds'" (para. 16). Among journalists who would cite this *Time* story to bolster their own (counter)claims about Mack and his abduction research were Milo Miles (1994) and James Gleick (1994), authors of two of

the most critical reviews of *Abduction* (see below). The *Boston Herald* (McKenna, 1994) and the *Boston Globe* (Kahn, 1994) would cite *Time's* story in news reports on Mack as well.

"Author says case studies show alien contact is no hoax"

In a feature about him and his abduction research, published April 19 under this headline (which, notably, did not mention "Harvard" or "sex"), Mack was taken relatively seriously by Boston's blue-collar newspaper, the *Boston Herald* (McKenna, 1994). This story led with accounts from three of Mack's abductee-clients and introduced Mack as a "Harvard psychiatrist and Pulitzer Prize-winning biographer [who] thinks" — not believes — "they are telling the truth" (p. 41). While citing abductees' "memories of being artificially inseminated" and their feelings of "deep personal violation" (p. 41), this story did not spotlight the prurient aspects of abduction stories as so many others did. Mack was clearly identified as the news in this story, a "linking presence...a well-respected clinician, administrator and advocate for environmental causes [whose] imprimatur on these formerly derided tales has ignited huge controversy" (p. 41). The *Herald* reported "academic reaction has veered from dismay at [Mack's] forthrightness and relief that he [has] tenure" (p. 41). This story referred to "pointed stories in 'Psychology Today' [sic] [Neimark, 1994] and the New York Times [Rae, 1994] [which] have suggested that Mack is at best credulous and at worst deluded" and mentioned that *Time*'s story (Willwerth, 1994) provided an "account of a supposed 'debunker,' who claims to have faked her abduction accounts and accuses Mack of misusing hypnosis" (p. 41). The *Herald*'s story closed with a quote from *Abduction* (fairness, balance): "'The

abduction phenomenon…is about what is yet to come. It presents…visions of alternative futures, but it leaves the choice to us'" (p. 41).

"E.T. phone Harvard;

Dr. John Mack could use the help as critics rip his research"

In a feature published April 21 under this headline, the *Boston Globe* (Kahn, 1994) made its story about the publication of *Abduction* timely with citations to *Time*'s just-out story about Mack (Wllwerth, 1994). Noting that *Time*'s story was written by a "veteran investigative reporter...a specialist in health-research abuse," the *Globe* relayed Donna Bassett's claim to *Time* that "Mack's work is riddled with scientific improprieties" (p. 61). Linking criticism of Mack's research with publicity for his book, the *Globe* observed, "these attacks on [Mack's] credibility have hit a raw nerve. Mack is in the launch phase of an all-out publicity blitzkrieg" (p. 61). The story noted, as others did (e.g. Bernays, 1994, in *The Nation*; Rae, 1994, in *The New York Times Magazine*; Van Matre, 1994, in the *Chicago Tribune,* 1994), that Mack's "credentials far outweigh those of any previous investigator publicly aligned with the abduction recovery movement." The *Globe* reported that *Time*'s story "hits below the professional belt, [Mack] contends" (p. 61). The rest of the story related Mack's response to *Time*'s allegations; comments from the reporter who wrote the *Time* story, James Willwerth, who, the *Globe* reported, said "*Time*'s lawyers thoroughly vetted his piece" (p. 61); and remarks from Donna Bassett. Like previous stories about Mack (Neimark, 1994; Rae, 1994; Willwerth, 1994), however, this story, too, closed on an upbeat note, with a quote from Mack (fairness): "'I have this innocent confidence that if you do your work in a comprehensive and objective

way...it stands on its own. I'm not worried the attacks will silence me. What I worry about is giving [abductees] support…. I don't want to disappoint them'" (p. 61).

"Aliens land at Harvard!

John Mack lends his reputation to a dubious starship enterprise:

the study of UFO abductions"

This is how Harvard's hometown newspaper, the *Boston Globe*, headlined its April 24 book review of *Abduction* (Miles, 1994). Written by *Globe* music critic Milo Miles, this review introduced author Mack as a scientific authority whose "studies of nightmares are revered among professionals" (p. B15). Mack's book, Miles declared, followed "the standard arrangement of sober research" but relied "on no more valid evidence than a supermarket tabloid" (p. B15). Mack "tosses logic and science overboard…[and] fails to perform even the simplest control experiments" (p. B15) in conducting his research, Miles claimed. Following the lead set by at least one other journalist (e.g. Neimark, 1994), Miles reported "Mack's method of recovering memory through hypnosis is a flashpoint of furious controversy" (p. B15). Legal challenges to claims of recovered memories "have exploded into headlines," Miles claimed, but "Mack breezes past the issue" (p. B15) by arguing that the validity of recovered memories has not been disproved. "Consensus reality is going to be overturned with this thin reed? Many earthly explanations are out there, but Mack brushes them aside" (pp. B15, B17), he asked in his review. Reaffirming Mack's authority, however, Miles said "perhaps Mack's eminence will force more measured study until a consistent, useful psychological paradigm of meetings with aliens emerges" (p. B17). Miles deemed Mack "eager...to believe" and

assert that "uncorroborated anecdotes...are simply insufficient" (p. B17) to support Mack's claims. "Anecdotes might be enough to further a particular agenda of mystical ethics, however" (p. B17).

With this assertion Miles got to his apparent point, that Mack's research threatened the hard boundary between science and religion. Speculating that Mack's abduction research might be "more a task for a guru than a psychiatrist" and claiming "Mack makes little distinction between these roles" (p. B17), Miles declared Mack's claim "that the West is hampered by too much dualistic logic and science…a perilous delusion" (p. B17):

> The secular world and the spirit world must be kept as separate as church and state in a free society.... Lucid reasoning is endangered nowadays...the post-scientific subjectivity [Mack] advocates is so slippery it could just as easily become a tool of fear and violence as of spiritual unity.... Mack should beware that if rationality and objective truth are thrown out the door, no one can predict what will rush in (p. B17).

"Harvard psychiatrist John Mack has never had sex with a space alien,

nor does he care to…"

An Associated Press story about Mack and his book (Thompson, 1994) was printed in a number of daily newspapers over the last two weeks of April under a variety of headlines, highlighting the Harvard professor, aliens, sex, and belief. AP's story began: "Harvard psychiatrist John Mack has never had sex with a space alien, nor does he care to. It could compromise his objectivity. Mack, a Pulitzer Prize winner and Harvard faculty member, firmly believes those people who claim to have had extremely close encounters with beings from other worlds" (p. 4A). Though a typically terse AP report, this story was nonetheless representative of stories about Mack's abduction research, with its catchy

lead mentioning Harvard, aliens and sex; account of abduction experience; description of Mack's research; commentary from Mack; and comments from critics. "As 'Abduction' hits bookstores this week, Mack hits daytime television. His fellow academics have been less welcoming than talk show hosts" (p. 4A), the story reported. This story appeared in papers from Biddeford, Maine, to Bellingham, Washington[6], sporting headlines such as:

> "Pulitzer winner believes in close encounters"
> "Research on human-alien sex stirs ripples in academe"
> "Aliens mate with humans! Harvard professor believes it!"
> "Professor says tales of alien abduction true"
> "Harvard doctor gives close encounter claims credibility"
> "Ivy-covered weird?"
> "Sex with aliens? Doctor believes it"
> "Sex with an alien? Could be…"
> "Aliens mate with humans! Harvard professor believes it!"
> "Doctor a believer"
> "Sex with aliens? Believe it"
> "Those sexy space folks are real, prof says"

"Someone to watch over us"

Under this odd headline *The New York Times Book Review* devoted two pages to *Abduction* in its May 1 issue. This review was authored by psychiatrist James Gordon, who had previously written about abduction in the *Atlantic Monthly* (Gordon, 1991).[7] Gordon opened his book review with the observation that Mack — whom he identified as a "noted psychiatrist," Harvard professor, and "Pulitzer Prize-winning author" — "is respectfully trying to describe and explain a wildly sensational and much derided experience" (p. 13). Gordon deemed Mack's book "fascinating, suggestive, and even inspiring" and indicated that in his own exploration of abduction (for the *Atlantic*) he himself had been, like fellow expert Mack, impressed "by the absence of gross psychopathology in people who believed they were abducted and by the elusive nature

and transformative character of the abduction experience" (p. 14). Nonetheless Gordon cataloged *Abduction*'s shortcomings. Abductees' accounts as reported by Mack, according to Gordon:

> Lack the weight of authority that Dr. Mack and a sympathetic reader would like to give it. It is not so much that Dr. Mack doesn't prove his case as that he doesn't offer some of the crucial data he might have collected, or present the critical and self-critical analysis that such provocative material demands (p. 13).

Abduction is "most vulnerable to criticism," Gordon wrote, "precisely on the clinical and scientific ground to which Dr. Mack has the strongest claim," given that the book "gains its authority from the author's psychiatric experience and scholarship" (p. 14). Mack should have supplied "data from psychological testing…equally disturbing is the dearth of material about Dr. Mack's methodology," and Mack's "discussion of his own biases is sketchy" (p. 14). Gordon concluded, however, that Mack had "performed a valuable and brave service" in writing *Abduction*, "enlarging the domain and generosity of the psychiatric enterprise" (p. 14).

The New York Times Book Review subsequently published letters to the editor about Gordon's review. In one a reader asked, "Do you think your readers are a bunch of morons?" (Ligon, 1994, Sec. 7, p. 23). The reader deemed Mack part of "a small but influential group in the psychiatric profession who have thrust the recovered-memory theory upon [us] with disastrous results" and deemed Gordon "one of these unbelievably misguided psychiatrists" (Sec. 7, p. 23). In the other letter, a self-described "student of U.F.O.'s" (Anderson, 1994) blamed Gordon for "missing the mark as to methodological and analytical standards…in the very act of criticizing" (Sec. 7, p. 23) Mack for missing

that same mark. In addition to these critical readers, at least one other reviewer (Gleick, 1994; see below) would take Gordon's review as unwarranted praise and fault its author, as a credentialed M.D., for not trashing *Abduction*.

"*The doctor's plot*"

For the May 30 issue of *The New Republic*, best-selling author[8] and former *New York Times* science writer James Gleick (1994) wrote a lengthy review of *Abduction*, published under this headline. In his review Gleick attempted to depict Mack as a disreputable researcher and a traitor to science. In his lead Gleick declared Mack a believer rather than a knower, "a Mark" — a gullible dupe — "masquerading as a Smart" (para. 2) — a discriminating observer. "What really makes Mack different from the standard flying-saucer nut," Gleick wrote, "is that he's got authority" (para. 20). Gleick declared abduction "mythology," equating it with "anti-science cults" (para. 5). He associated Mack with "ufo-obsessed therapists" (para. 25) and charged this lot with attempting "to persuade [psychologists and psychiatrists] there is something clinically respectable about looking for ufos" (para. 44) as they explore patients' histories. He declared Mack's research "grossly lacking in respectable methodology" (para. 29). Gleick claimed Mack's abduction research was part of "a dangerous trend" toward "the "blurring of distinctions between real knowledge and phony knowledge" (para. 5), and he claimed a possible cause of the problem was that, "outside of hard science, too many academics have fallen into the literary conceit that anyone's version of reality is as valid as anyone else's" (para. 48). As to Mack himself, Gleick observed, "no amount of

rational discourse can change the mind of a believer" (para. 48). (See Chapter 6 for further analysis of Gleick's review.)

"Spaced out — and other delusions:

gullible travelers, claims of space ships and alien abductions"

Taking a critical but short-of-polemic approach to the Mack abduction story, under this headline *The Nation* ran an opinion piece on the subject (Bernays, 1994). "At the height of the nuclear movement," the piece began, "John Mack, a psychiatrist and professor at Harvard…chained himself to a fence" at the Nevada Test Site, a "gesture…altogether in character" (p. 904), thus establishing Mack as a suitable subject for a progressive political magazine. This piece, by Anne Bernays, described Mack as "far more convinced…than he is skeptical" (p. 904) of abduction stories and criticized him for his uncritical stance. "If John Mack were the local chiropractor…few would pay much attention to him…. But this man is a Harvard professor," Bernays wrote. "I see nothing to distinguish alien abduction…from such other foolishness as astrology…pyramid power" and other "wacko responses to the normal anxieties of everyday life," she declared. Echoing Gleick (1994), Bernays compared belief in abduction to "the conviction that the Holocaust never happened, claiming such beliefs defied "reason, common sense and logic." Characterizing Mack as "a man of undeniable talent," Bernays concluded her story, "I'm baffled by his eagerness to…breed gullibility" (p. 904).

"Out of this world"

Meanwhile, under this headline *People* magazine ran a feature on Mack and his book (Rosen, Podolsky & Brown, 1994). *People*'s story opened with the assertion that abduction stories have been tabloid news but have "never attracted serious interest from scientists. That may change with the publication of Abduction" (p. 38). *People* structured the story to fit its particular format, focusing on people and reporting abductees' stories rather than scientists' criticisms. This story profiled Mack as "a believer in close encounters of the most lurid kind," "obsessed," "too deeply committed to abandoning his studies now" (p. 38), ultimately achieving the effect of framing him as a stereotypically heroic explorer-scientist.

The *Chicago Tribune* (Van Matre, 1994) described Mack as an expert with "impeccable credentials" who was comfortable exploring "fringe fields…an alternative approach…issues outside the mainstream" (p. 1). This story followed a now-typical outline, providing details of abduction accounts, Mack's views and criticisms, presenting Mack as a heroic figure standing up to his opponents in the name of greater understanding. Two Harvard psychiatry professors were asked about Mack: "'he's never been afraid to take a stand or follow his intuition…. His whole career has been about blazing trails'," David Jacobs was quoted; "'people who are idealistic take risks'" (p. 1), George Valliant was quoted.

"True believer takes on UFO skeptics"

In June 1994 the *Seattle Times* reported on Mack's appearance at a local conference sponsored by Committee for the Scientific Investigation of Claims of the Paranormal

(CSICOP), an organization of self-described skeptics dedicated to defending the boundaries of positivistic science (see Chapter 7), on the topic of "the psychology of belief" (Dietrich, 1994, p. B1). Headlined "True believer takes on UFO skeptics," this story[9], published in a Friday edition of the paper, framed Mack's local appearance as news (proximity, official source, unusual, controversy, entertainment). "John Mack is a Harvard psychiatrist…and a Pulitzer Prize-winning biographer "who also believes about 90 of his patients have been abducted and molested by space aliens" (p. B1), according to the story's lead. Mack's claims about abduction were reported in this story, along with counterclaims from University of Kentucky psychologist and abduction debunker Robert Baker and California psychiatrist William Cone, who was identified as someone who had treated people who claimed they had been abducted. (A shortened version of this story was reprinted in the *Seattle Times* the following day, in the paper's Saturday edition, with this same lead but under the new title "You can fool some of the people….") In accordance with the conventions of balance and fairness, this story did not overtly favor any particular claims over others, but by labeling Mack a believer it tipped the balance against him in this debate.

CSICOP's *Skeptical Inquirer* magazine reported (Genoni, 1995a) that the Seattle conference was intended "to explore the various ways in which our minds operate, how our views are formed, and how our memories can be influenced, altered, and even manufactured" (para. 1). The conference "featured sessions on UFOs and alien abductions [and] the highly controversial recovered-memory debate," *Skeptical Inquirer* reported, and "the first session, with...Mack discussing alien abductions...created the most

controversy" (para. 1). Tagged "the most visible spokesman for the abduction phenomenon," Mack was quoted telling the conference, "'There is a world of other dimensions, of other realities that can cross over into our own world'," and he called abduction stories "authentic mysteries" (para. 4).[10]

Act II, Scene II: Scientists and skeptics have their say

Following the journalistic convention of dependence on expert and official sources, reporters consulted other scientists about Mack and *Abduction*, as noted above. *Psychology Today* (Neimark, 1994) quoted Boston psychiatrist Fred Frankel: "'Mack's use of hypnosis runs counter to all we know about it'" (para. 45). *People* magazine (Rosen, Podolsky, & Brown, 1994) quoted Johns Hopkins University psychiatrist Paul McHugh: "'I worry about John. He's a brilliant man who is easily persuaded of things, and this time he has lost it'" (p. 38). Harvard Medical School psychiatrist Malkah Notman was quoted in *The New York Times Magazine* (Rae, 1994, see above). Notman was also quoted by AP (Thompson, 1994): "'There's a split between how people regard [Mack] as someone with past accomplishments and skills and how they regard this project…. People are skeptical because it just seems quite remote and unsupported'" (p. 4A). Psychologist Richard Ofshe — like Mack, a Pulitzer Prize winner, expert, and elite scientist (see Chapter 1) — was quoted in *Psychology Today* (Neimark, 1994) claiming:

> '[Mack] made a stellar, absolutely impressive, world-class series of mistakes. First, he was in bed with Sigmund Freud, and we are already beginning to see the obituary of Freud. Then he was in bed with Werner Erhard, another big-time loser. Now he's in bed with E.T.'s evil brother' (para. 43).

Psychology Today identified Ofshe as "a crusader against what he calls extreme forms of influence," including "therapist-induced false memories retrieved in trance" (para. 42). Ofshe was quoted in *Time* (Willwerth, 1994) claiming Mack's techniques were "'substantially harming lots of people'" (para. 3). *Time* also quoted Ofshe saying Mack's abduction work showed "'how foolish psychology and psychiatry can be in the wrong hands'" (para. 3). Ofshe addressed the CSICOP conference in Seattle where Mack also appeared (Dietrich, 1994, see above). According to the *Skeptical Inquirer* (Genoni, 1995b) Ofshe told the CSICOP audience that using hypnosis to recover repressed memories was "subjecting people to the closest thing to the experience of rape and brutalization that can ever be done without actually touching them" (para. 18). He reportedly "compared the proliferation of recovered-memory therapists to the grim lobotomy operations [of] the thirties, forties, and fifties" and declared that while "there is no evidence for the existence of recovered memories, there is data establishing the dangers of hypnotherapy" (para. 18).

CSICOP fellow and Mack friend Carl Sagan was quoted in *The New York Times Magazine* saying that he had told Mack "'that on issues of this importance, extraordinary claims demand extraordinary evidence'" (Rae, 1994, para. 34). CSICOP fellow, aerospace journalist and UFO debunker Philip Klass (1994a). in his "Skeptics UFO Newsletter" (published by CSICOP) quoted Mack telling a "sympathetic" audience at a UFO conference, "'I don't know where to draw the line'" — presumably between what's real and what's not in abduction accounts — "'so I tend to document the whole thing [and]…I antagonize the UFO community which is crazy to receive objective scientific

legitimization'" (para. 2). Under the headline "Mack's Harvard tenure reportedly threatened by faculty investigation," Klass (1995) later reported in his newsletter that Mack, "a leading guru in the UFO-abduction movement...is under fire from his colleagues" (para. 1). In this story Klass quoted from a letter from Mack's attorney claiming that a draft report of the school's investigation panel had stated:

> 'It is professionally irresponsible for any academic, scholar or practicing psychiatrist to give any credence whatsoever to any personal report of a direct personal contact between a human being and an Extraterrestrial Being until after the person...has been subjected to every possible available battery of standard psychological tests which might conceivably explain the report as the product of some known form of clinical psychosis.... To communicate, in any way whatsoever, to a person who has reported a `close encounter' with an Extraterrestrial life form that this experience might well have been real...is professionally irresponsible' (Klass, 1995, para. 3).

Act II, Scene III: Meanwhile, on the fringes…

While intellectual elites shape public opinion about science, "different versions of and various challenges to...elite languages [appear] in popular and alternative cultures," as Ross (1991) observed, "apprentices, amateurs, semi-legitimates, and outlaws" (p. 10) who challenge the dominant scientific paradigm and at the same time respect and emulate it. For comparison with stories that appeared in elite media, texts on Mack's abduction research appearing in popular and what I will call here "fringe" media dedicated to coverage of unidentified flying objects and other so-called paranormal phenomena were examined.

"Mack's Harvard credentials, plus the fact that he won a Pulitzer Prize…have helped make him the leading light in the UFO field," according to the *Skeptical Inquirer* (Emery, 1995a, para. 2). In a "UFO update" with a headline claiming Mack "says alien

encounters, while traumatic, may be our gateway to God" (Baskin, 1994), the borderline science-science fiction magazine *Omni* called Mack "the first world-class scientist to jump on the abduction bandwagon" (p. 77). While "most of Mack's fellow [abduction] investigators put little stock in his ideas," according to *Omni*, and "many abductees also vehemently disagree with Mack's findings" (p. 77), psychiatrist John O'Brien, chief executive officer of Cambridge Hospital, was reported to have "only praise" for Mack, and an American Psychiatric Association representative was reported to have commented on Mack's research that the APA supports "any responsible scientific research into human behavior" (p. 77).

In a review of *Abduction* for *UFO Magazine*, reviewer Michael Miley (1994), identified as the editor of *Propaganda Review*, posed the question: "How do you scientifically frame the exploration of a disturbing phenomenon...? Skeptics might argue that even accepting such a characterization is in itself an abandonment of the scientific standpoint" (Miley, 1994, p. 36). Miley structured his review in a conventional fair-and-balanced way, though he proceeded from the assumption that UFOlogy is a legitimate scientific endeavor. And while he approached Mack's book as a scientific study he himself redefined "scientific" — specifically, what constitutes a qualified scientific researcher — to fit with Mack's approach. He thus ended up praising Mack for his study of abduction, labeling him courageous (perhaps even heroic) for it. Like mainstream-media journalists (e.g. Kahn, 1994; McKenna, 1994; Miles, 1994), Miley cited other reporters' claims about Mack, noting "mainstream magazines like *Time* and *Newsweek*...have fallen all over themselves to debunk Mack's work" (p. 36). Sticking to the standard UFOlogist's

argument that real science can solve the UFO-abduction mystery, Miley wrote that one "cannot understand Mack's book, UFOs, or the abduction phenomenon itself without a broad range of credentials" (p. 37). People unfamiliar with altered states of consciousness and alternate dimensions, "something that's true for many ufologists and abduction researchers," Miley wrote, "really have no credentials for comprehending them" (p. 37).

To attempt to understand the UFO-abduction phenomenon, Miley asserted, one "should be aware of the latest developments in theoretical physics.... The world that emerges in these theoretical models is non-material, multi-dimensional and largely invisible" (p. 37). One should also have "some understanding of the findings of transpersonal psychology, near-death research, and the study of world shamanism.... Furthermore, the evidence shows that the world as we know it is partially a construct of human consensus...there is finally no purely 'objective' truth...but only an 'intersubjective' truth.... Finally, [one] should have some sense of the global ecological crisis engineered by international capitalism" (pp. 37-38). Mack "meets all of these criteria," Miley asserted, "and for his troubles, he's getting lambasted everywhere in the press (and even in a MUFON review) for his methods [and] findings" (p. 38). Critics' "slanted and malicious reading" of *Abduction* is "*propaganda* [emphasis in original]," Miley claimed, "used to enforce a worldview and to support a status quo" (p. 38), Miley claimed. "That said," he continued, *Abduction* "is not without flaws," Miley wrote, but he concluded by praising Mack for "the open-minded courage [he] has shown in publishing *Abduction*" (p. 38).

The *MUFON UFO Journal* review of *Abduction* that Miley (1994) referred to in his review was written by Timothy Heaton (1994), an associate professor of earth sciences at the University of South Dakota. (MUFON is the Mutual UFO Network.) Heaton, like Miley, proceeded with his review from the assumption that UFOlogy is a legitimate scientific endeavor, approached Mack's book as a scientific study and redefined "scientific" — though in a different way, by identifying the UFO-abduction phenomenon as an important scientific mystery and Mack's unconventional approach the way to solve it — to enable himself to pass positive judgment on *Abduction* and also depict Mack as courageous, even heroic, a "genius" (p. 14). Heaton (1994) opened his review by explaining that MUFON originally "was organized to win UFOs back from the 'contactees' and the tabloids and to promote scientific investigation of a phenomenon that the scholars had rejected" (p. 13). He said MUFON had "a chip on its shoulder" about the scientific legitimacy of UFOlogy, manifested in an "emotional emphasis on scientific reporting...prestigious titles offered to scientists willing to join the cause" (p. 13) and the "dogma" of UFO conspiracy theories, a dogma that "has been moderately successful in gaining scientific respectability…and avoiding any overlap with the lunatic New Age fringe" (p. 14).

Nonetheless, Heaton wrote, "the more we learn, the more enigmatic the UFO phenomenon becomes," and "the UFO has now become synonymous with the so-called 'abduction phenomenon'" (p. 13). "Ufology has long been plagued by a reliance on amateur investigators," Heaton commented, and thus UFOlogists had "great expectations" when they learned that Mack, a professional researcher, "distinguished

Professor of Psychiatry at Harvard Medical School, espoused the cause" (p. 13). But *Abduction* "aroused nothing but controversy in both the UFO and psychiatric communities" because Mack "linked UFO encounters with all the shady New Age phenomena that the skeptics had always lumped it with...little critical analysis or justification" (p. 13). Heaton claimed, nonetheless, that *Abduction* was "a landmark contribution" (p. 13) to UFOlogy.

The book's "strongest theme," Heaton asserted, "is human spiritual evolution, a topic that falls on thin soil in both the psychiatric and UFO communities" (p. 13). In considering why Mack chose to pursue this theme, Heaton said it was important to consider "the transformation in [Mack's] thinking that took place during…his abduction study" (p. 14). "Science, as we know it today, is the study of the physical world," Heaton wrote; "it attempts to explain all phenomena on a physical basis, even psychological issues such as religious faith and visions" (p. 13). Heaton noted in his review that Mack had reported in *Abduction* about Kuhn's advice to "circumvent Western dichotomies" (p. 14) in his study of abduction. "Kuhn has shown that scientific objectivity is largely a myth and that our cultural biases shape our perception of reality" (p. 14), Heaton wrote, observing that Mack had apparently heeded Kuhn to the benefit of his study of abduction. Heaton concluded:

> It took someone with Mack's genius to realize that the abduction phenomenon is bound to change our whole epistemology as well as our world view, and therefore a 'scientific' study did not seem appropriate...he is trying to break new ground by *not* playing by the rules.... Mack's book is enormously thought provoking and deserves a more careful look…. It is not the last word on anything, but it is a beginning (pp. 14-15).

Mack also drew the attention of *Saucer Smear*, the self-described "Official Publication of the Saucer and Unexplained Celestial Events Research Society." *Saucer Smear*, which bills itself as "dedicated to the highest principles of UFOlogical journalism" and "shockingly close to the truth" (Moseley, 1995a), takes an interesting approach to UFOlogy, simultaneously serious, skeptical, and debunking. (*Saucer Smear* editor James W. Moseley is described in the publication as both a serious and semi-serious UFOlogist and a UFO "hoaxer" as well.) *Saucer Smear* reported on Harvard's investigation of Mack's abduction research as follows:

> It looks like...Mack has beaten the rap, regarding the effort to censure (and censor) his UFO work...the details are clouded in academic top-secret security, but the announcement has been made that Mack will not be censured, though he was issued 'an unusual public warning from the Dean not to let his enthusiasm for UFO research steer him from the path of professionalism.' *Smear* believes that Mack is gullible and also very subjective in his tentative conclusions about abductions, but we are extremists when it comes to Freedom of Speech. Therefore we are delighted that Mack will presumably be free to rave on (Moseley, 1995a, n.p.; see also Moseley, 1995b).

Act II, Scene III: The year after, and aftermath

In 1995 *Abduction* was reissued in paperback, with a new introduction and two new appendices explicitly responding to criticisms leveled in two key book reviews (Gleick, 1994; Miles, 1994); and Harvard Medical School completed its investigation of Mack's research methods. In his introduction to the paperback edition, Mack said he had added, deleted, and altered text in revising the hardcover *Abduction* for paperback publication specifically in response to criticisms levied by journalists: James Gleick, in his review of *Abduction* for *The New Republic*, and Milo Miles, in his review of the book for the *Boston Globe*. Mack deleted a number of claims made in the hardcover *Abduction* from the paperback edition of the book, including the following:

> The experience of working with abductees has affected me profoundly…. We participate in a universe or universes that are filled with intelligences from which we have cut ourselves off…. Our restricted worldview...lies behind most of the major destructive patterns that threaten the human future (Mack, 1994a, p. 3).

Due largely if not solely to Mack's self-imposed embargo on media interviews with journalists, media coverage of Mack's abduction research was sparse throughout that year. The *Washington Post* mentioned Mack's research in a story about UFOs (Vick, 1995), asserting that *Abduction* "set the high-water mark in the [UFO] subculture's mainstreaming" and at the same time embarrassed "the nuts-and-bolts crowd" in that subculture by posing the possibility of "another consciousness" (para. 11). In May, as Reuters reported (Emery, 1995b), Mack broke a self-imposed media embargo on interviews with journalists to hold a teleconference with interested reporters about the Medical School's investigation. The Reuters story claimed Mack "seemed to be a man wrestling with two parallel universes" (Emery, 1995b, para. 3). Reuters noted that *Abduction* had "put [Mack] on virtually ever major U.S. talk show. And he is the man of the moment among UFO enthusiasts because his Pulitzer Prize and Harvard credentials have lent an air of credibility to beliefs and theories long shunned by…the serious scientific community" (para. 7). The Reuters story mentioned the *Boston Globe*'s "E.T. phone Harvard" headline of the previous year (Kahn, 1994) as well as *Time* magazine's piece on Mack featuring Donna Bassett's debunking claims (Willwerth, 1994). About his work, Mack was quoted saying that, "'from the point of helping the people, I think it's been worthwhile'" (para. 19).

A *New York Times* news roundup, under the headline "Fair Harvard, please meet Geraldo" (Bloom, 1995), lumped the Mack investigation together with other current Harvard "scandals." This story claimed "the nation smirked" over the Medical School's "scathing criticism" (para. 3) of Mack and noted, "At least part of the fascination is in watching the mighty fall…the public is interested in seeing the school heaped with indignity" (para. 8). In another *New York Times* news roundup (Honan, 1995), Harvard University provost Albert Carnesale was quoted on the Mack investigation, "'Not one person has raised that with me as having anything to do with Harvard'" (para. 14). In a metro section Harvard news roundup, under the headline "At Harvard, a higher than ever profile," the *Boston Globe* made passing mention of the medical school's investigation of Mack (Grunwald, 1995). According to the *Boston Herald*, the medical school's report on its investigation of Mack was expected to be harsh (Weber, 1995).

The *Washington Post* reported on Mack's troubles as well (Daly, 1995). This story stated in its lead that when *Abduction* was published in 1994, "reaction was strong and swift" (1995, para. 1); that is, the book became a bestseller, and Harvard Medical School initiated an investigation of Mack's work. Mack, "an eminent senior psychiatrist" (para. 3), became "the country's most credible spokesman," the *Post* reported, "for the view that" people who believe they have been abducted "are not deranged" (para. 3). In academia, however, "Mack was considered over the top," according to the *Post*, "methodologically suspect and perhaps a bit unhinged" (para. 5). "What makes Mack's case so troubling, according to his supporters, is that [he] is not suspected of any bad acts

— only of bad ideas" (para. 19), the story asserted. According to the lead of an Associated Press (AP) story on the investigation (Thompson, 1995):

> A year ago, Harvard psychiatrist John Mack cruised the talk-show circuit promoting his best-selling book about people who say they had sex with aliens. Now, a committee of colleagues is investigating. Before he started talking about space aliens, Mack was a well respected professor at Harvard Medical School" (p. A13).[11]

"The review began after Dr. Mack, [a] professor who studies UFOs," AP said in this story, "appeared on 'Unsolved Mysteries' and other television programs to promote" (p. A13) *Abduction*. When the medical school announced its findings on Mack (it issued a public statement but withheld the final report on the investigation), the *Skeptical Inquirer* reported Mack was "off the hook, but with something akin to a warning" (Emery, 1995c, p. 4). Tagging Mack "possibly the country's best-known and best-credentialed proponent of the idea that people who think they have been kidnapped by space aliens actually may have been" (p. 4), the *Skeptical Inquirer* reported that the medical school "refused to release the report of its probe, or to answer any questions raised by its statement" (p. 4). The story quoted the school's public statement on the Mack investigation:

> 'During the past year, a committee of peers was appointed by the Dean of Harvard Medical School to review the clinical care and clinical investigation that Professor John Mack has carried out with persons who believe that they have been abducted by aliens. The review has been completed. Dean Tosteson has discussed the issues raised in the review with Dr. Mack. He has urged Dr. Mack that, in his enthusiasm to care for and study this group of individuals, he should be careful not, in any way, to violate the high standards for the conduct of clinical practice and clinical investigation that have been the hallmark of this Faculty. He also reaffirmed Dr. Mack's academic freedom to study what he wishes and to state his opinions without impediment. Dr. Mack remains a member in good standing of the Harvard Faculty of Medicine. It is the School's long-standing practice not to disclose the content or findings of such reviews. No further comment will be made' (p. 4).

A month after the conclusion of the investigation was announced, the *Boston Globe* reported, under the headline "Harvard professor faulted on UFO work" (Beam, 1995), on an alleged leak of a critical letter from Dean Tosteson to Mack about the investigation. The story began with the claim that while the medical school had "declined to censure…Mack, an official letter summarizing the still-secret investigation…criticizes his research methods, his accounting procedures and his use of the Harvard name and insignia to promote his treatment of UFO 'abductees'" (p. 35). The *Globe's* story noted Mack had "discussed…his findings on television talk shows and in his 1994 best-seller 'Abduction,' prompting severe criticism from his Harvard colleagues" (p. 35).

Act III: Benign neglect — another book, sans firestorm

Following the conclusion of the medical school's investigation, Mack appeared to focus his communications on more receptive audiences, and journalists, skeptics and critics appeared to be paying less attention to his work. Literary critic and self-styled memory warrior Frederick Crews (1996) worked Mack into a critique of mysticism, occultism, and, of course, Freud, for *The New York Review of Books*. In this article Crews placed "belief in extraterrestrial visitation" among "an array of ludicrous and generally harmless New Age practices" (p. 39) and claimed "the sublimely gullible Harvard psychiatrist John Mack…accepts UFO abductions at face value" (p. 44). "Having been hypnotically reinforced in the belief that alien kidnappers once played doctor with them in hovering spacecraft, those patients must be regarded as classic victims of therapeutic occultism" (p. 44). Like "established religion" (p. 44). Crews declared, this sort of psychotherapy appeals to "the unquenchable human thirst for meanings that can ease our doubts,

sanction and regulate our urges, and flatter our self-conception…. Does mere empirical rationality stand a chance against an appeal that speaks so directly to our needs?" (p. 44).

Critic Wendy Kaminer (1996) addressed Mack's *Abduction* (1994a) in a review of several "best-selling spirituality books" (para. 2) for the *Atlantic Monthly* magazine. In this review, entitled "The latest fashion in irrationality," Kaminer claimed the popular books she was critiquing shared "a general belief in immortality and the presence of extraterrestrial or celestial beings devoted to our welfare…[and] a general disdain for reason, enshrined by therapeutic culture" (para. 5). Noting that abduction stories tend to "end in enlightenment — the revelation that we are not alone in an indifferent universe" (para, 4), she claimed these pop-spirituality books "offer membership in a spiritual elite," while their authors "tend to see themselves as messiahs" (para. 18). What these books have in common, she wrote, is "denigration of skepticism…encouragement of habits of unreason" and "the elevation of personal truths and personal testimony over logic and verifiable fact" (para. 20). "Propaganda of the extreme right," she said, "employs the same techniques of argument" (para. 21).

In 1997 the *Boston Herald* ran a Sunday-morning front-page story (Schorow, 1997) about a local public event featuring Mack, a "dialogue" sponsored by PEER and including abduction researcher Budd Hopkins. "Call this a close encounter of the academic kind," the story led off, "two of the biggest names in alien abduction squaring off over the most divisive issue in UFO research" (p. 1). The issue was "not whether abductions are real" (p. 1) but whether aliens were abducting humans for good, as Mack asserted, or for ill, as

Hopkins claimed. “Mack raised eyebrows even within Harvard’s arched walls over his bestseller ‘Abduction’” (p. 1), the *Herald* noted. This story about the “battle of UFO titans” (p. 1) was framed as local news and as drama of an entertaining sort, opposing not only Mack’s and Hopkins’ views on abduction but also their contrasting personal styles. Mack was described as the “intense, acerbic and a compulsive note-taker,” while Hopkins was characterized as “beaming, affable, and relaxed” (p. 1).

In 2000, the *San Francisco Chronicle* also reported on a local appearance by Mack in the city’s suburbs, in an article entitled “ET may want to call Contra Costa [County]” (King, 1999). “The topic of extraterrestrial life was served up with lunch yesterday in Pleasant Hill,” this story opened, and “not one of the 60 people on hand was delayed en route by an alien abduction” (para. 1). But “luncheon speaker John E. Mack would have known what to do. After all, he’s the Harvard professor who wrote the book on the subject” (para. 2). The story quoted an amazon.com reader review of Mack’s *Abduction*: “’The fact that anyone can believe in stories such as those presented here is an indication that our society has lost whatever ability it once had to thinking critically and scientifically’” (para. 9). It then noted that, at the Mack event, “there wasn’t a hint of skepticism voiced” (para. 10) about his abduction research.

Passport to the Cosmos: more scientific?

In 2000, Mack published his second book on abduction, *Passport to the Cosmos*, drawing far less attention than he did with his first. Mack took pains to qualify all of his claims and identify all potential limitations, omissions, biases, and conflicts — that is, he made

a great effort to be scientific. He explained his study method in greater detail than he did in *Abduction*. He also continued to traverse the boundaries of science, citing several philosophers of science, for example, to back what he framed as scientific claims. Mack was identified on the cover of *Passport…* as "Pulitzer Prize-winning author of the best-selling Abduction." The cover blurb continued: "Mack powerfully demonstrates...[writes] with...authority...stunned the world...breaks provocative ground.... For Mack, questions of science...lead to questions of religion...Mack further solidifies his reputation as a...pioneer on the forefront of the science of human experience, an authoritative voice**...."** *Fate,* a magazine dedicated to "true reports of the unknown," called the book "fascinating…thoroughly engrossing…written with a scholarly elegance and refinement of tone" (n.p.).[12] *UFO Magazine* (Interview with John Mack, 2000) reported, "That a doctor and author with such impressive credentials should take seriously [abduction] stories...was very important to the UFO community, who now felt they had an ally in their battle for 'scientific respectability'" (para. 1).

English professor Robert Begiebing (2000) wrote about Mack's abduction claims in a commentary for *The World*, the magazine of the Unitarian Universalist Association. For the religious community that was his audience, Begiebing labeled Mack's account of the abduction phenomenon "the latest in an ancient and honorable line of mythic transformation narratives" (para. 3). Mack's claim that the universe "contains intelligences beyond the material realm" is something "religions have…long taught" (para. 5). While Mack's research might challenge the boundaries of astrophysics and psychiatry, he wrote, "that doesn't negate the urgent, transformational imagery of

ecological cataclysm reported by his patients" (para. 12). In 2001, *New Age Journal* published an interview with Mack (Lawler, 2001).[13] In this article Mack was identified as a Harvard psychiatrist with a "long and controversial career as a scientist and activist" (para. 1). He was characterized as "ever the intellectual peripatetic" (para. 8), a man with "the cautious traits of a scholar, the wariness of a maligned media figure, and the enthusiasm of a college student discovering himself" (para. 11). Responding to the question, "do you see what you are doing as science?" Mack was quoted:

> Knowing is not the same when you can't create a controlled experiment, but there still can be reliable ways of knowing. I can't create an experiment that brings a bunch of UFOs together. But I do believe there is a quality of openness of mind and rigor we can apply. We can develop standards of authenticity, reliability, multiplicity of witnesses. This might be considered a science of the sacred or of human experience (para. 14).

Asked how he determined the reliability of abduction claims, Mack reportedly said his approach was to evaluate the claimant's mental state and take the claimant's psychological history — "the standard clinical exam and, in some early cases, batteries of psychological testing. I will get character witnesses" (para. 13). "And there is something more," he added; "it is feeling that a person is speaking as if they've been there — this comes from body language, the look in their eye, from having no other agenda. I'm working to better define this" (para. 13). Asked whether he was "trying too hard to drag science into an area that is the domain of religion" (para. 18), Mack talked about geneticist and Nobel laureate Barbara McClintock. Mack was quoted:

> She fused with what she was working with…. Your instrument of knowing is your whole self, your intuitive self, your full consciousness. What really good scientists and those who take us 'beyond the veil' have in common is full engagement with that other self, with the matter at hand (para. 18).

(In one short answer Mack thus aligned himself with a Nobel laureate and "really good scientists" as well as "those who take us 'beyond the veil'.") Asked "do you…believe in this phenomenon?" Mack was quoted responding, "'It's a no-brainer. It can't be accounted for in purely interpsychic ways…. It has to come from somewhere'" (para. 24). On whether his ideas about abduction had gained acceptance since the publication of *Abduction* in 1994, Mack was quoted, "'No, on the contrary…there is a kind of heating up [of] a not-very-friendly discourse between contending worldviews'' (para 21). About the personal and professional consequences of engaging in abduction research, Mack was quoted:

> I don't have any regrets…. I've probably gained more colleagues and friends since I began this than I had…before…. Life is short, and one tends to gravitate to people one is in turn with. It's been more of an expansion of my horizons...than it has been a suffering (para. 25).

The anticlimactic conclusion of Mack's abduction research program in October 2003 (see Chapter 4) appears to have gone largely unnoticed by journalists, at least those reporting for elite media….

Notes

1. I delivered a paper on this initial analysis, conducted in 1996, to the Association of Educators in Journalism and Mass Communication in August 1997 in Chicago. Entitled "An Elite scientist at the boundary: the power of evidence and the evidence of power in media coverage of science," this unpublished paper reported on a close reading of the following texts, which have been reexamined for this case study (one additional text examined in my 1996 analysis was not reexamined for this analysis): Chandler, 1992; Emery, 1995a; Kahn, 1994; Mack 1994a, Mack 1994b; Mack, 1995; McKenna, 1994; Rae, 1994; Thompson, 1995; Willwerth, 1994.
2. In spring 1998, I conducted a small-scale, quantitative content analysis, examining a convenience sample of nine elite-media texts (including Chandler, 1992; Kahn, 1994; McKenna, 1994; Rae, 1994; Schorow, 1997; Tery, 1992; and Thompson, 1995). The unit of analysis in this study was the sentence, and N=579. The concept assessed was media commentary on Mack's abduction research. Dimensions measured were credentials and credibility, methods and methodology, evidence and proof, publicity, and personal interests. Positive, negative, and neutral indicators of each of these dimensions were identified and quantified. Results of this analysis — which was limited, not replicated and therefore inconclusive, though nonetheless intriguing — showed that Mack's scientific credibility and research methods appeared to be of greatest interest to

journalists among dimensions analyzed. More interesting to me, however, results also showed that a majority of the content analyzed had a neutral valence, despite what appeared to be a negative framing of the manifest content of the stories. I chose to conduct a qualitative analysis in this study for reasons described in Chapters 1 and 3.

3. I concluded my formal search for texts at the end of 1999 because Mack told me in March 1999 that he intended to avoid media interviews for the foreseeable future. I collected a few texts dated after December 1999 that I found by means other than Lexis-Nexis searching.
4. According to Mack's PEER staff, the *Harvard Magazine* article was the first media report on Mack's abduction research (personal communication, Will Bueche, PEER staffer, November 3, 2000). I found nothing dated earlier in my searching.
5. I am referring to the publication, rather than the author of the story in the publication, in citing the contents of texts for this analysis, except in cases where an author is writing in the first person, as Neimark (1994) did at some points in her story for *Psychology Today*, or otherwise clearly expressing a personal rather than ostensibly objective editorial view, as, for example, Gleick (1994), Miles (1994) and others did in book reviews of *Abduction*.
6. The following list includes citations to Anne Thompson's 1994 Associated Press story about Mack, found in the Lexis-Lexis-Nexis database and in the archives of the Program for Extraordinary Experience Research (PEER). The list is not intended to be comprehensive. Thompson's story as cited in the text of this

chapter was published in the Memphis (TN) *Commercial-Appeal* and is listed in References; the following citations are not included in References:

• April 19: New Bedford (MA) *Standard-Times*, Professor says tales of alien abduction true; Taunton (MA) *Daily Gazette*, Harvard doctor gives close encounter claims credibility.

• April 20: *Annapolis* (MD) *Capital*, Prof: aliens mate with humans; *Ann Arbor* (MI) *News*, Ivy-covered weird?; *Bellingham* (WA) *Herald*, Book charts close encounters of the sexual kind; *Biddeford* (ME) *Journal Tribune*, Sex with aliens? Doctor believes it; *Bennington* (VT) *Banner*, Aliens and parallel universes; *Borger* (TX) *News Herald*, Harvard professor's book centers on close encounters; *Corry* (PA) *Journal*, Sex with an alien? Could be…; *Dublin* (GA) *Courier-Herald*, Harvard professor believes space aliens have mated with humans; *Cape Cod Times* (Hyannis, MA), Professor backs alien-abduction reports; *Little Falls* (NY) *Evening Times* and *Aberdeen* (WA) *Daily World*, Aliens mate with humans! Harvard professor believes it?; *Manchester* (NH) *Union Leader,* Close encounters of the Harvard kind: prof believes sex-with-aliens stories; *Shelby* (NC) *Star*, Harvard professor release book about close encounters; *Shelbyville* (IL) *Daily Union*, Harvard prof believes aliens mating with humans; *Steubenville* (OH) *Herald-Star*, Doctor a believer; *Vineland* (NJ) *Daily Journal*, Sex with aliens? Believe it.

• April 21: *Dayton* (OH) *Daily News*, Those sexy space folks are real, prof says; *Harrisonburg* (VA) *News-Record*, Dr. Yes: Sex-with-aliens tales win respect; *The Times* (Pawtucket, RI) Book outlines sex with aliens; *Sheridan*

(WY) *Press*, Pulitzer Prize winner writes book on sexual encounters with space aliens.

• April 26: *Fitchburg* (MA) *Sentinel & Enterprise*, Harvard psychiatrist writes of space abductions in new book.

7. In 1996, before I began my doctoral studies, I met James Gordon when we both participated in a panel discussion on UFOs and the search for extraterrestrial intelligence sponsored by American University's School of Communication. As far as I recall, we did not discuss abduction. Gordon did not respond to subsequent, repeated requests by phone and letter for an interview for this research project. Gordon now runs the Center for Mind-Body Medicine at Georgetown University in Washington, D.C.
8. Two of Gleick's popular science books reportedly have been best sellers and National Book Award nominees (Christopher, n.d.) — *Chaos: making a new science* (1987, New York: Viking) and *Genius: the life and science of Richard Feynman* (1992, New York: Pantheon).
9. I found Dietrich's *Seattle Times* story also published in the following papers (this list of citations is not intended to be comprehensive): Amarillo (TX*) Daily News*, June 25, p. 1A, True believer argues with UFO skeptics; Buffalo (N.Y.) *News*, June 25, p. A4, UFO issues heats up as Harvard expert faces skeptics; *Denver Post*, June 25, p. 5A, Patients abducted by aliens, psychiatrist believes; *St. Petersburg Times*, June 25, p. 4A, You can fool some of the people…
10. Mack debunker Donna Bassett, who took her story to *Time* (Willwerth, 1994), also spoke at CSICOP's Seattle conference. CSICOP reported in its *Skeptical*

Inquirer magazine (Genoni, 1995) that at the conference Mack implicated well known UFO debunker and CSICOP fellow Philip Klass "in having a hand in Donna Bassett's work" (para. 9), prompting Klass to respond: "Taking the microphone, [Klass] chastised Mack for making what he labeled 'false innuendoes.' 'Before you made accusations . . . why didn't you check with me? I could have told you that the first time I talked to Donna and her husband about you and your work was when they called me on January 9.' After a few more exchanges, Paul Kurtz intervened and brought the session to a conclusion" (Genoni, 1995, para. 10). Donna Bassett was married to Ed Bassett, who reportedly used to work with Klass at the trade magazine *Aviation Week & Space Technology*. On August 9, 2004, I conducted a Google search for further information on Donna Bassett and her abduction claims. I found no information about her background, credentials, or motives. But I did find more than 500 sites maintained by self-described skeptic, UFO or paranormal groups reporting on Bassett's claims to *Time*. A sampling of these sites showed that most had repeated what *Time* had reported about Bassett's story, with no additional information. *Truth Seekers International Review, Vol. 1(2),* February-March 1995 (retrieved August 9, 2004, from http://www.truthseekers.freeserve.co.uk/truth/tr2mack.html) reported on an interview with Mack in which he responded to a question about Bassett's allegations: "I am constrained by patient confidentiality. I'm not free to speak about what her motives were or the details of the case when she came to me. I saw Donna Bassett in good faith several times. If in fact she did fool me, which could happen - it's not impossible - then she was lying to me

consistently…. In fact, she has established herself as an effective and thorough on-going liar, [so] how can she be considered an authority on matters of integrity regarding my work, methodology, patient-client and physician relationship?… The fact is I didn't use one word she had to say in my book. Does that mean I didn't trust her, or that I didn't think she was telling the truth?… The other experiencers who knew her well…believe she's an abductee who became disturbed and couldn't deal with her experiences. I'm not saying that I believe that, but others do. So it isn't clear. I tend to credit that as a possibility, given that I know what my sessions with her were like. I think that's consistent with the sessions. What I found troubling with the *Time* magazine article was that the writer - who I guess had a connection with Donna's husband, Ed Bassett, a journalist - took this story on face value and used it to discredit me. The things Donna Bassett says about me and my work are not accurate. They are not true. He did not go to the 50 or 60 other abductees who would have supported my work, who found it helpful, useful, positive - he went with the one person, an admitted liar, or liar claimant, and made that the story" (n.p.). This particular episode in the Mack case is intriguing and worth this extended footnote, but it is beyond the scope of this analysis to pursue a full account of it.

11. Anne Thompson's 1995 AP story was also found in the following papers with these headlines (this list is not intended to be comprehensive): Harvard questions alien abduction research, *Asheville (NC) Citizen-Times*, May 25, p. 2A; Harvard investigating sex-with-aliens research. *Charleston Gazette*, May 5, p. 2D; Harvard panel targets scholar, alien abduction, *Chattanooga Times*, May 5, p. A14;

Harvard probes 'alien sex' research, *Memphis Commercial Appeal*, May 5, p. 4A; Out of this world: Harvard scrutinizes alien-sex research. *Phoenix Gazette*, May 5, p. A2; Harvard questions space alien research: professor faces peer review after book puts him on talk show circuit, *Rocky Mountain News*, May 5, p. 45A.

12. Information on reviews of *Passport to the Cosmos* was obtained from the Web site of the John E. Mack Institute. Retrieved August 9, 2004, from http://www.johnemackinstitute.org/passport/blurbs.html.
13. In the interest of disclosure, I should note that the reporter who interviewed Mack for *New Age Journal* is a friend of mine, and this assignment was the product of my suggestion that he might enjoy writing about Mack's abduction research.

Chapter 6

The Case of the Deviant Doctor:

rhetorical strategies and boundary-work explored

As noted in Chapter 1, culture has been described as a "pattern of meanings…a system of inherited conceptions" (Geertz, 1973, p. 34), a process whereby reality is created, maintained, and transformed. In the Case of the Deviant Doctor, as shown in Chapters 4 and 5, journalists and scientists referred to a "system of inherited conceptions" (p. 34) of what constitutes legitimate science in evaluating Mack's controversial claims, maintaining social reality as they perceived it by rhetorically defending what they believed to the tenets of good science. The case explored in this analysis was a case of communication as ritual, an enactment of culture (Carey, 1992), a case in which journalists struggled over "over the definition of what is real" (Carey, 1992, p. 31), referring to the views of expert scientist-sources to lend authority to their stories.

This case involved deviance from what many journalists, and scientists, as detailed in Chapters 4 and 5, appeared to consider accepted scientific conventions, relating to such things as data collection, methods, and worldview. Jill Neimark (1994) in *Psychology Today* noted, for example, that Mack appeared to have "abdicated scientific objectivity" (para. 49). Framed as an elite scientist by Neimark, and, indeed, virtually all journalists who wrote about his involvement in abduction research, Mack was also typically depicted in these stories as a maverick (Dearing,

1995) and, in some stories, even a heroic figure who was challenging the powers that be in the world of science, raising questions about the ontology, epistemology, and phenomenology of science. According to Nelkin (1995b), journalists depend on scientists for information about science and thus tend to reinforce what she claimed to be the conventional scientific worldview in reporting about science. Most journalists whose texts were examined for this study appeared to follow this pattern, exhibiting what appeared to be a disinclination to reconstruct the boundaries of science as they perceived most scientists were publicly delineating them. But at the same time some of these same journalists who appeared to be affirming the conventional scientific worldview also appeared to be unable — perhaps even unwilling? — to dismiss Mack's expanded conceptions of the boundaries of scientific practice and scientific reality, in keeping with the journalistic conventions of fairness and balance. *The New York Times Magazine*'s story about Mack (Rae, 1994), for example, ended with a question (in the form of a quote from one of Mack's experiencers) "Is it real?" (para. 49).

As I noted in Chapter 1, I began to construct a body of texts for this analysis with stories I first identified as atypical, and in the early stages of reading and rereading these texts I found myself thinking that these stories were somehow alike in their atypicality. As I proceeded with my analysis, however, I began to read these stories as both a body of related texts and a diverse and multilayered lot, ranging from respectful profile (e.g. Tery, 1992) to strident polemic (e.g. Gleick, 1994) to playful entertainment (e.g. Schorow, 1997). Further rereading and deeper probing revealed that beneath this variety of structures, styles and strategies might be a common drama. The texts examined for this analysis tended to repeat a common narrative of an elite scientist pursuing controversial

research, scientific authorities insisting on compliance with accepted procedures (and worldviews), and the maverick scientist insisting on his freedom of thought. But these stories were not simply replications. The texts were related: each text implicitly or explicitly made links to previous texts, by recapping previously reported events, citing previously cited expert sources, and referring to other elite-media texts such as stories in *Time* magazine (Willwerth, 1994) and *The New York Times* (Rae, 1994).

Each text was also unique. Some were constructed to fit a particular medium. Neimark's (1994) story for *Psychology Today* was a deeply detailed profile of a psychiatrist and his work as well as an exploration of a controversial practice (hypnosis) and an even more controversial idea (repressed and recovered memory) in the field of psychology, framed and fleshed out to serve the interests of the magazine's audience. *Time*'s story about Mack (Willwerth, 1994) was billed as a piece of investigative reporting, appropriate for a news magazine. Stories published in urban daily newspapers were appropriately short and snappy (e.g. Kahn, 1994; McKenna, 1994; Thompson, 1994) and in at least one case (i.e., Schorow, 1997) tailored to fit a Sunday-edition page-one slot. Stories in the Boston papers (e.g. Kahn, 1994; Tery, 1992; Schorow, 1997) reported on Mack as local news, though other papers (e.g. Thompson, 1994; Thompson, 1995) framed essentially the same content as national news given Harvard's and Mack's national reputations. In his science column for the *Boston Globe*, physicist Chet Raymo (1994) focused on holding up Mack's abduction research to what he claimed were accepted conventions of science: "Scientists have traditionally chosen the explanation that involves the least number of

causes that fall beyond that which we already know…. We should 'run counter' [to conventional wisdom] only when we need to; that's the essence of science" (p. 28).

In keeping with the news value of timeliness, most stories were pegged to a current event such as the publication of *Abduction* (e.g. McKenna, 1994; Kahn, 1994) or the conclusion of Harvard Medical School's Mack investigation (e.g. Emery, 1995c; Honan, 1995; Thompson, 1995). And while a number of stories featured the same expert sources (Richard Ofshe and Fred Frankel were cited, for example, in Neimark, 1994; Willwerth, 1994), many stories featured something new — for example, a different abduction story or expert source or a local event (e.g. King, 1995). Stories in fringe media targeted to the UFO community were less likely than stories in mainstream media to cite elite-scientist critics of Mack, and they were more likely to give overt credence to Mack's controversial scientific worldview. But even while some stories in the UFO media praised Mack for pushing at the boundaries of the conventional scientific worldview to make room for abduction (e.g. Miley, 1994), others called Mack "gullible" and "subjective" (e.g. Moseley, 1995a), just as some mainstream journalists did (e.g. Gleick, 1994; Neimark, 1994), for taking abduction seriously.

Some stories were relatively straightforward accounts of Mack's abduction work and claims (e.g. Chandler, 1992; Meyers, 1992; Lawler, 2001; McKenna, 1994; Rosen, Podolsky, & Brown, 1994; Tery, 1992). Some stories were skeptical (e.g. Jefferson, 1992; Neimark, 1994). Others were overtly critical, some with a good dose of sarcasm (e.g. Bernays, 1994; Gleick, 1994; King, 1999; Miles, 1994). Among the media texts

examined for this analysis, all identified Mack as an expert and authority, making his Harvard affiliation prominent. Virtually all mentioned his Pulitzer Prize as well. Stories described Mack as controversial and unconventional (Rosen, Podolsky. & Brown, 1994); respected (Willwerth, 1994) or "well-respected" (McKenna, 1994, p. 41) — one story (Thompson, 1995) described him as "well respected…before he started talking about space aliens" (p. A13) — brilliant (Neimark, 1994; Rosen, Podolsky, & Brown, 1994); talented (Emery, 1995b); "intense but scholarly" (King, 1995, p. A11); earnest (Daniel, 1994); sincere, passionate, and committed (Rosen, Podolsky, & Brown, 1994); cautious, wary, but enthusiastic (Lawler, 2001). Stories made note of this authority's bypassing peer review and seeking publicity.

Throughout the conduct of this analysis, I was intrigued — and frustrated – to discover that virtually every rereading of these texts, singly or collectively, revealed more evidence of possible meanings. Continued examination of these texts as a body kept yielding new ways of labeling and connecting them. The meanings, labels and connections discussed here are those for which I believe I can make a good case, within the framework for analysis described in Chapter 3 and based on the literature review documented in Chapter 2.

The unfolding drama

Literary action is symbolic action, and words are the modes of this action, "acts upon a scene" (Burke, 1973, p. xvii). The symbolic action of communication is the enactment of a drama, a ritual for the purpose of maintaining culture over time (Carey, 1992), and the structure of the

drama can reveal its actors' motives. The drama in this case, as journalists framed it, centered on a controversy over Mack's abduction research. Journalists reported on an expert and authority who had overstepped the perceived bounds of professional, academic, scientific propriety by studying the so-called abduction phenomenon. In the course of this drama, journalists charged Mack with multiple transgressions: believing abduction stories, using hypnosis, validating the concept of repressed and recovered memory, questioning the conventional scientific worldview, mixing science with politics and religion, and acting like a pseudo-scientific therapist rather than a scientific M.D.

The case under study here provided what Wynne (1991) called "a point of entry" to a "real-world" encounter in which "scientific knowledge [was] reconstructed" — by Mack and by journalists, toward different ends, though both to serve their own interests — "to make it fit real situations…(or reject it if it cannot)" (p. 113). In this case actors (rhetors) constructed boundaries between science and non-science, between psychiatry and psychology, Freudian psychoanalysis and neuroscientific psychiatry, "psych" sciences and "hard" sciences, science and philosophy, science and politics, and, perhaps most importantly, science and religion. Mack rhetorically traversed all of these boundaries in several senses of the word. He crossed and re-crossed them, he scrutinized them, and he also went counter to them. He challenged their adequacy, validity, and utility. But at the same time, he constructed his research as scientific by locating it within the conventional boundaries of science, thereby reinforcing the very same boundaries he was attempting to alter. Mack described the abduction phenomenon as a violation of the conventional scientific worldview. Journalists reported Mack's research as a violation of scientific

convention, consensus, propriety, standards; a violation of public trust. They blamed Mack, not alien abductors, for violating his clients — their trust, peace of mind, mental health. Journalists seemed to be operating under an assumption that someone with Mack's credentials had a responsibility to serve as a scientific authority, a responsibility requiring him to police, not breach, the conventional boundaries of science.

Structure and strategy

An individual text is an element of a dramatic dialogue, "a strategy for encompassing a situation," an answer to "assertions current in the situation in which it arose" (Burke, 1973, p. 109) grounded in an "unending conversation" colored by interests that "do not 'cause discussion' but...shape it" (p. 112). In keeping with Carey's (1992) conception of communication as ritual, stories in this case can be interpreted as ritual enactments of journalists' roles as boundary tenders, monitors of social and cultural norms and deviance. It is likely that journalists would not have found the research in this case worth reporting on except for the scientist who was conducting it: a member of the scientific elite (tenured Harvard professor, Pulitzer winner), a properly credentialed professional (Harvard M.D., accredited psychoanalyst) an expert and authority (widely published, cited, and known). Some journalists explicitly made this point.

Mack structured his texts as scientific investigations-*cum*-philosophical inquiries, a boundary-blurring exercise in itself, enacting a drama of exploration. Mack made the story of his abduction research theater by performing it in public, for audiences of commoners as well as for elites. He presented his drama as an unsolved mystery and an epic in progress. The scene of this drama, the

late 20th century, was a time rife with ideas about extraterrestrial life, fears of global havoc, and power struggles over who may speak for science. Critics defined abduction as illegitimate because it did not fit onto the standard cognitive map of science, and Mack acknowledged that within the boundaries of conventional science abduction claims made no sense, but he declared the standard cognitive map inadequate because it could not accommodate abduction.

The superficial structure of the typical media text examined for this analysis followed the conventional who-what-when-where model of news and reflected core news values of timeliness, controversy, authority, and human interest. Journalists reported on the who-what-when-where of Mack's abduction research, focusing on the publication of *Abduction* or some other current and related event to make their stories timely. Longer magazine features addressed the "how" and "why" as well. With headlines and leads showcasing Harvard, aliens, and sex, these stories established journalists as proper skeptics. For most journalists, Mack's status as an expert and authority and his credibility and credentials were at the heart of the news.

Mack's abduction research and his book about it were worthy of journalists' attention, were *news,* mainly because Mack had credibility, authority, and elite status, a Harvard affiliation and a national reputation. Stories were made interesting by emphasizing the sensational aspects of abduction stories and by providing human interest with accounts of abductions. Stories also appeared to be conventionally balanced "on the one hand, on the other hand" reports, fair assessments with quotes from Mack, from supporters, from skeptics and critics. As mentioned earlier, texts were interlinked, with elite media referring to each other and second-tier media referring to the elite. For example, the *Boston Globe* (Kahn, 1994; Miles, 1994), the *Boston*

Herald (MacKenna, 1994), and *The New Republic* (Gleick, 1994) cited *Time*'s story. *The New Republic* (Gleick, 1994) and the *Washington Post Book World* (Rucker, 1994) cited the *New York Times Book Review* (Gordon, 1994). The cover of *Abduction* (Mack, 1994a) quoted the *Boston Globe Magazine* (Tery, 1992), and the *New York Times Magazine* (Rae, 1994) echoed the quote. The *Boston Herald* (MacKenna, 1994) cited the *New York Times Magazine* (Rae, 1994).

The scene of the drama was science — the world of scientific authority and elitism, epitomized by Harvard. The world of psychiatry was also part of this scene, a world of respected M.D.s treading the fuzzy borders between the objective, neuroscientific psychiatric worldview and contested ideas and practices such as repressed and recovered memories, intersubjectivity, and hypnosis. Science as the scene in which the rhetorical acts in this case took place influenced the agents, or actors, in the drama. Though different agents appeared to deploy different rhetorical strategies (acts) on the same scene (science) in this drama, their basic conceptions of science and scientific authority ultimately did not vary much. However, different agents foregrounded and backgrounded different aspects of science and its authority to advance or protect their particular interests.

The scene was complex. Onstage was an elite scientist, a credible expert studying an incredible subject, along with journalists who were questioning his credibility, the validity of his research methods, the propriety of the publicity he was receiving, and the influence of his personal interests on his work. Offstage were the cultural institutions of science and journalism — their norms, values, practices, methods, worldviews. Other elements of scene in this drama were the scientific elite, represented by Harvard; an ongoing dispute over the validity of the concept of

repressed and recovered memories and the method of hypnosis for recovering such memories; controversy over Freudian psychoanalytic ideas and techniques; and the persistent presence of stories about extraterrestrial visitations. For Mack, science was the scene from which he could depart on his journey of scientific exploration (and the scene to which he could return). For journalists, the scene of science was a bounded conception of reality: what could be sensed, measured, and explained.

Mack's motive in telling his story was to expand the boundaries of science in order to accommodate the abduction phenomenon. Journalists' motives in telling their stories were to define and reaffirm the accepted boundaries of science and thus explain the abduction phenomenon as something that was not real because it did not fit within these boundaries. Rhetorical strategies employed by Mack, journalists, and Mack's scientist-peers in this case served to affirm favored conceptions of scientific authority, scientific legitimacy, and scientific worldview and refute competing conceptions. Mack made consistent, but ambiguous, claims for his authority as a scientist and the legitimacy of his research as science, while journalists labeled him, his practices, and his interests in ways that appeared intended to refute Mack's claims and reaffirm the conventional, positivistic worldview. Journalists tended to lean hard on the unwritten rules of science in reporting on Mack's controversial claims, raising questions about scientific evidence, scientific methods, scientific propriety.

For journalists, perhaps the most important element of the scene on which this drama unfolded was the world of news, defined according to conventional news values: current events, interesting people and occurrences, experts and authorities, conflict, deviance. Journalists used

their system of conventions to process Mack's abduction research as news, his world of news, focusing on current events (conferences, new books), conveying the views of expert and authoritative sources (Mack, Mack's peers, and self-proclaimed skeptics), highlighting conflict, and flagging deviance. In talking with journalists about his abduction research, Mack attempted to stretch the boundaries of science to accommodate his thinking about his work. In texts examined herein, Mack's critics — journalists framing their stories and scientists cited by those journalists — appeared intent upon placing him and his claims outside the boundaries of "normal" science, focusing on credentials, methods, evidence, interests, publicity and worldviews.

The texts examined for this analysis constituted a metatext — a metanarrative or metadrama, as it were. The metanarrative was a story about a member of the scientific elite (a tenured Harvard professor, Pulitzer winner, and established authority) transgressing the boundaries of professional convention (peer review, approved methods, positivistic worldview) and the intriguing and titillating occurrence (abduction accounts) that prompted his transgression of the boundaries of science. This dramatic dialogue took a familiar and popular form. Like episodes of "The Twilight Zone" and "The X-Files," the drama began in the mundane world of ordinary people and places but veered off into the extraordinary, in the end leaving its audience contemplating an unsolved mystery. The metanarrative about Mack's abduction research was a story about a power struggle, an apparent conflict over where the boundaries between legitimate and illegitimate science lie and who has the right to establish where they lie.

Mack was sometimes explicit about his interest in this struggle. He told one journalist "the official intellectual community" (Tery, 1992) could not let go of the conventional scientific worldview. "It's the elite people, my colleagues, who decide what we're supposed to believe," Mack told another (Thompson, 1994). This case was, undoubtedly, a credibility contest (Gieryn, 1999). At first glance, it appeared that journalists covered Mack's abduction research as a subject of controversy. But on second glance, it was not clear what exactly the controversy was about: the reality of the abduction phenomenon, the validity of hypnosis, the authority of psychiatry, the credibility of a particular elite scientist, all of the above, or something else. On third glance, Mack's linking of science with spirituality migrated to the foreground as the possible heart of the controversy.

Agents, acts, and agency

"When you begin to consider the situations behind the tactics of expression, you will find tactics that organize a work technically because they organize it emotionally," Burke observed (1973, p. 92). The situation in which Mack deployed his rhetorical strategies and tactics, the scene on which his drama unfolded, encompassed an elite institution — Harvard in particular and the scientific community in general — discomfited by his interest in abduction, a broad public audience — newspaper readers, television watchers, UFO buffs — interested in abduction, and his own complex array of personal and professional interests.

Mack was the primary agent in this drama, supported by abductees, his "co-creators." Mack's colleagues in elite science were his antagonists. The act as Mack described it was

the mapping of new epistemological territory. The agency driving Mack's mapping was scientific authority. Mack identified himself as an M.D., psychiatrist, clinician, Harvard professor and expert in trauma with a lifelong interest in issues of identity and a growing curiosity about "crossing over" the conventional scientific boundary between the material and immaterial worlds. Mack saw his purpose in this drama as exploring the unknown and sharing what he found, the archetypal cultural function of the hero. Campbell (1956) described the mythic journey of the hero as a journey of departure, initiation, and return — the crossing of a threshold from the known world into "darkness, the unknown, and danger" (p. 77), a "separation from the [known] world, a penetration to some source of power, and a life-enhancing return" (p. 35). During this ritual passage, the hero-seeker is introduced to secrets, to knowledge, which he/she then brings back to the point of departure. The heroic journey is one of transcendence, a dangerous foray into "self-discovery and self-development" (p. 10). "A hero ventures forth from the world of common day into a region of supernatural wonder," as Campbell said (p. 3). Many journalists superficially attempted to rewrite the drama that Mack performed, resorting to debunking in some cases. But substantially, many reproduced the epic form of Mack's heroic journey.

Whether wittingly or unwittingly, Mack depicted himself on a heroic journey into a numinous realm of supernatural wonder in his exploration of abduction. And, wittingly or unwittingly, journalists recapitulated the tale of Mack's journey. At the same time that journalists criticized Mack for his choice of research subject and methods, questioned his credibility, and framed his work as violating scientific norms and tainted by personal

values and interests, they also played to stereotype in casting Mack as a heroic figure, larger than life, with almost superhuman abilities — "a high-profile idealist" as one writer put it, "a man with a halo of perfection...one of the best and the brightest...paterfamilias and healer...a high priest" (Neimark, 1994).

The sensitizing concept of boundary-work (Gieryn, 1983, 1995, 1999) has proven to be a useful tool in examining rhetorical strategies in this case. Boundary-work, as Gieryn (1983) explained, "describes an ideological style found in scientists' attempts to create a public image for science by contrasting it favorably to non-scientific intellectual...activities" (p. 781), and "descriptions of science as distinctively truthful, objective or rational may best be analyzed as ideologies: incomplete and ambiguous images of science nevertheless useful for scientists' pursuit of authority" (pp. 792-793). Elite scientists maintain the boundaries of science by making a distinction between knowledge, which they label objective, and belief, which they label subjective, Latour (1987) observed: "A partition is made between those who have access to the nature of the phenomena, and those who, because they have not learned enough, have access only to distorted views of these phenomena" (p. 183).

Lessl (1996) called this rhetoric the rhetoric of scientism, and he claimed it is "an enduring feature of the public ideology of science" (p. 379) that scientists employ to maintain their cultural authority. This case shows how journalists employ this sort of rhetoric to reinforce the cultural authority of scientists. As shown in Chapter 4, Both Mack and his peer-critics employed scientistic rhetorical strategies to defend the

boundaries of their own divergent conceptions of scientific reality, and as shown in Chapter 5, journalists tended to reproduce these distinctions. In this case I found journalists reinforcing what they perceived to be the prevailing ideology of science by describing science as objective, rational, firmly rooted in the tangible physical world. By protecting their authority as providers of authoritative information, journalists at the same time reinforced the authority of expert and official sources who subscribed to this ideology.

Journalists reported on Mack as a scientific authority, though they tended to frame him as a maverick authority who was questioning the conventional ideology of science. In the texts examined for this study, journalists and their scientist-sources criticized Mack for ignoring what they labeled obvious explanations for reported abduction experiences. They could not definitively make the case, however, that Mack had not learned enough, did not know enough, to understand such things as dreams and sleep paralysis. Mack used the same argument to respond to his critics, claiming they had not learned enough, did not know enough, to understand the full extent of reality as he conceived it.

Mack's rhetorical strategy was intended to persuade his peers and others that he faced a problem requiring a solution: abductees' trauma. Journalists' rhetorical strategies tended to convey that the problem to be solved was Mack's violation of the boundaries of scientific authority, legitimacy, and propriety. Many journalists bore down on hypnosis, the method Mack used to help people recall their memories of abduction experiences, as a weakness in Mack's research. Some critiques placed the story of Mack's abduction

research in the larger context of the so-called memory wars, an extended public dispute over the validity of the concept of repressed and recovered memory, and the use of hypnosis to recover such memories.

Selective vocabularies, debunking strategies

People seek "vocabularies that will be faithful reflections of reality," Burke (1969a) observed, but in practice they necessarily "develop vocabularies that are selections of reality, and those selective vocabularies "function as a reflection of reality" (p. 59). As far as it provides the necessary reflection, a selective vocabulary "has the necessary scope," but "in its selectivity, it is a reduction," Burke said. "Its scope and reduction become a deflection" (p. 59) when such a vocabulary fails to explain its subject. In Mack's view, the scope of the selective vocabulary of positivistic science was too narrow, too reduced, to fully describe reality, a reality he perceived as extending beyond the observable material world. Mack's motive was to open the door to all possibilities. Journalists' motive was to guard the door and protect the boundaries, to defend norms and fend off deviance, thereby maintaining order. Burke said names embody attitudes or motives, and the way an act is named reveals the motives of the namer. Mack named abduction a "phenomenon" and abductees "experiencers," to keep the boundaries of scientific reality fuzzy. He named himself "clinician" and "psychiatrist" to legitimate himself as a researcher and objectify his interest in abduction. Journalists named abduction accounts tales and myths; they did not call them lies but they did not deem them real. They called Mack a believer — not a scientist or a knower. But at the same time they made much of Mack's status as a scientist and knower….

Mack was consistent, if not always clear, in describing his interests, for audiences ranging from the expert to the mainstream to the fringe — his sense of self and mission, his research rationale, his conception of science and the role of his research as a scientific endeavor. Mack superficially employed a conventional, deliberative, "scientific" rhetorical strategy to convince his audience of the legitimacy of his claims, and himself. In his one peer-reviewed publication on abduction (McLeod, Corbisier, & Mack, 1996), he and his coauthors emphasized this scientific strategy. But Mack more effectively employed an underlying rhetorical strategy of acceptance, emphasizing ambiguity and complexity to keep the picture of the abduction phenomenon fuzzy and the boundaries between material scientific reality and his own expanded conception of reality open.

By this strategy, which he employed in his peer-reviewed paper, his books, and in interviews with mainstream and fringe journalists, Mack conveyed that simple explanations and quick answers would not be forthcoming in this case. "The original information was obtained non-dualistically, i.e., through the intersubjective unfolding of the investigator-abductee interaction," he wrote (1994a, p. 25); "the information that is obtained does not fit within accepted notions of reality" (ibid. p. 31). This rhetorical ambiguity drew sharp criticism from at least one journalist (e.g. Gleick, 1994). While Mack reprocessed some of his rhetoric in revising *Abduction* for paperback publication, he stuck to his strategy of ambiguity and complexity and even turned up the heat a few degrees. Mack took his critics' knowledge claim — abduction is not possible — and reasserted it as an ignorance claim — we don't know if abduction is possible or impossible. He acknowledged that within the boundaries of orthodox science, abduction

claims made no sense. But if the boundaries were broadened, abduction *might* make sense, he said. Rather than insisting that abduction claims fit onto a standard cognitive map, he said a different map was needed to explore the phenomenon.

Undermining his own attempts at deliberative rhetoric, Mack made it clear that clarity was not what he had to offer. He took seriously Kuhn's warning to avoid "the structures and polarities of language" (Mack, (1994a, p. 20) that came packaged with the conventional scientific worldview. Mack told one reporter Kuhn warned him to "watch out for the traps of language" (Daniel, 1994). But while Mack did plenty of rhetorical hedging, he nonetheless could not escape the strictures of the dualistic vocabulary he claimed he was trying to avoid (real/unreal, happened/didn't happen) in his efforts to establish the legitimacy of his work. Mack frequently resorted to dualistic terminology in explaining his abduction research, unable to break free of the boundaries of his own native language, claiming, for example, that knowing requires an attitude of not knowing, framing himself as an expert and yet calling himself naïve and innocent as well. As explained in Chapter 2, journalists and scientists do their jobs according to conventions aimed at clarifying, simplifying, explaining, answering. Some journalists interpreted Mack's ambiguity and complexity as credulity, confusion, sloppiness, bad science or non-science. Mack was rhetorically consistent, and consistently rhetorical, in presenting his abduction research: he was consistently ambiguous, with his emphasis on not knowing, and consistently boundary challenging, with his assertions about the limitations of the conventional scientific worldview.

The aim of rhetoric, in Burke's view, is identification, which is compensatory to division. A rhetor attempts to find a point of identification with an audience and symbolically

create conditions for connecting with it. Mack's rhetorical strategy of strategic ambiguity allowed him to present himself as a scientific authority and expert, someone journalists and other non-experts could and should heed, and at the same time identify with audiences by calling himself "naive" and "innocent" and "not knowing." He told one reporter "we don't understand" abduction and admitted his "inability to explain" it (Tery, 1992). He presented himself as a properly detached researcher but also attempted to identify with his audience as a "co-creator" and a "stranger" as well.

By adhering to the conventions of their profession, journalists superficially kept themselves out of their texts, but they aimed for identification by defending what they believed to be a widely accepted conception of science: observing and recording the physical world, using accepted methods, submitting to peer review, keeping a low public profile, defending consensus reality, maintaining a skeptical attitude toward challenging views. They attempted to identify with their audiences by spotlighting deviance from the norm and maintaining order. Those same professional values and conventions, however, and perhaps personal values as well, sometimes led journalists to frame the maverick Mack as an admirable and even heroic figure. For journalists, Mack was a physical manifestation of the institution of science, in particular the authority of science, the power to establish what is real and what is not. In their stories, Mack, and science, were heroic figures transversing the boundary between the known world of everyday life and unknown worlds where conventional science could not explain everything there is.

Some journalists employed the strategy of debunking to respond to Mack's claims. Debunking aims to "discern an evil" (Burke, 1973, p. 168) and then attempts to eradicate it. But the debunker "perfects a mode of argument that would, if carried out consistently," undermine his own argument as well (p. 171). "In order to combat a bad argument, [the debunker] develops a position so thorough that it would combat all arguments — and then must covertly so rework this position that he may spare his own argument from the general slaughter," typically "by an unintentional ambiguity whereby he throws something out by one name and brings it back by another name" (p. 174). Journalists claimed Mack failed to make a credible case for the reality of abduction as a phenomenon and, thus, the legitimacy of abduction as a research subject. Hence there was no need for an expanded worldview. For debunking journalists, Mack's knowledge and understanding became belief; his worldview became his vision; his professional interests became his personal obsessions; his self-described naivety and innocence became credulity and gullibility. As Burke explained, these debunkers did not apply the same test to their own understandings/beliefs, their worldviews/visions. They did not consider that the scientific truth that debunking defends "is no less a 'stylization' than any other" (p. 128). Indeed, Mack made the point that the conventional scientific worldview was a belief system embodying elite values, an ideology serving elite interests.

Journalists' rhetorical strategies in this case succeeded in catching this reader's eye. They used the elite status of Harvard, the sensationalism of aliens, and the titillation of weird sex to grab readers' attention. Harvard stood in for scientific authority, aliens for forces out of the control of that authority, and sex for violation of that authority. In their stories journalists used "Harvard" to brand Mack a representative of scientific authority, "alien"

to frame him as a threat to that authority, and "sex" to establish him as an overt violator of that authority. Journalists employed frames of rejection in examining Mack's abduction research, especially his method of hypnosis and his validation of repressed and recovered memory. Though these stories appeared to be dominated by frames of rejection, frames of acceptance employed in the very same texts may ultimately have cancelled out or even overpowered the frames of rejection.

News as ritual

"The dramatic ritual materializes...by reference to an audience's interests," said Burke (1973, p. 403). It appears that journalists in this case presumed their audiences shared a scientistic worldview. In Burkean terms, scientism presupposes that science, rationality, nature, and reality are consubstantial; it is a perspective whose circumference establishes that positivistic science is the only means of acquiring legitimate knowledge about reality, and legitimate knowledge is what can be learned by means of approved methods and instrumentation. Stories about Mack functioned as ritualistic acts of boundary tending, staged in the form of news reports, telling audiences about the activities of official boundary-tenders, both normal and deviant. The pragmatic function of these stories was to inform audiences — and, perhaps, to entertain as well, in the case of at least some texts. Journalists were consistent in following their professional conventions to report on Mack's abduction research. Some put their individual marks on their stories as well, interpreting material in accordance with their own values and interests. The news was controversy, and the controversy was worth paying attention to because it involved elite scientists. But the ritual drama that journalists enacted in these texts was more

complex than that. The ritual function of these stories was to maintain culture over time — to maintain the cultural boundaries of science and scientific authority. In some cases, journalists constructed "well rounded" epideictics, as it were, enumerating Mack's praiseworthy qualities while at the same time also blaming him for an array of social and cultural transgressions. At least one journalist (Gleick, 1994) constructed an elaborate rhetorical victimage ritual to banish Mack from "science" and strip him of his authority. In some texts, epideictic became epic, with journalists recapitulating the form of Mack's heroic journey.

Doing what they believed they were supposed to do, complying with the journalistic convention of balance and maintaining the journalistic stance of skepticism, reporters liberally sprinkled their stories about Mack's abduction research with references to supermarket tabloids (e.g. Jefferson, 1992; Miles, 1994; Neimark, 1994; Tery, 1992); science fiction (e.g. Falk, 1993), myth (Gleick, 1994; Rucker, 1994), nonsense (Falk, 1993), cults (Falk, 1993; Gleick, 1994; Rucker, 1994), fantasies (Gleick, 1994), hallucinations (Gleick, 1994; Rae, 1994), claptrap (Rucker, 1994), fairies (Rae, 1994), and incubi and succubi (Falk, 1993; Gleick, 1994; Rae, 1994). By linking Mack's research with this cluster of non-science terms journalists kept Mack's claims at rhetorical arm's length, achieving a pragmatic aim. But the ritual function of this action was to reinforce the boundaries of conventional science and affirm the claims to scientific authority of those who draw those boundaries.

Mack's texts were colored by his personal and professional interests in war and peace, social change, consciousness and identity, spiritual awareness, and trauma relief. Journalists' texts were colored by their professional interests in reporting what's news, attracting an audience, consulting authorities, enforcing norms and flagging deviance. Interviews (see below) revealed how journalists' personal interests colored stories as well. Mack labeled himself a psychiatrist, clinician, and scientist. He characterized his role as a psychiatrist and clinician to be that of helping troubled people, his role as an M.D. and scientist to be that of pushing the boundaries of science toward improving understanding of the human condition. Journalists played out their roles to encompass defending and questioning the norms, the boundaries, of science. For Mack, challenging the boundaries of science, pushing them outward, was in the public interest; for journalists, tending and defending the boundaries of science, pulling them inward, was in the public interest.

Mack's texts were responses to cultural cues, assertions he heard in the ongoing dialogue about human experience, assertions that large numbers of people believe they have been abducted by aliens, that positivistic science can explain everything, that Western culture is suffering a spiritual crisis. Mack followed cultural cues about what a scientist is supposed to do (ask questions, test limits, solve problems), what a psychiatrist is supposed to do (help troubled people), what a clinician is supposed to do (treat patients), what a man of social conscience is supposed to do (act on his beliefs), what an expert and authority is supposed to do (tell non-experts what they need or want to know).

Journalists' texts about Mack's abduction research were responses to other cultural cues, assertions they heard in the ongoing dialogue about science: that abduction cannot be real (or can it?), that positivistic science can/cannot explain everything (in the physical world…), that good science depends on observation and evidence (but what kinds of evidence?), that hypnosis is not scientific (but then what is it?), that memories cannot be repressed and recovered (or can they?). Journalists' texts were also responses to cultural cues about what journalists are supposed to do: report timely, interesting, and potentially significant news; shine a spotlight on experts, authorities, and elites; describe the world. In writing about Mack, journalists followed cultural cues about how journalists are supposed to deal with authority (heed, affirm and question it), how they are supposed to deal with science (respectfully and skeptically, minding the boundaries of convention), how they are supposed to deal with controversy (cover it, in a fair and balanced way).

As noted in Chapter 2, "Journalists are trained to rely on scientific authority figures," but they "are also trained to distrust authorities" (Dearing, 1995, p. 343). Journalists homed in on Mack's credentials — Harvard-psychiatrist-professor-Pulitzer — to verify his credibility. They delved into Mack's interests, in consciousness, identity, social and political issues. Gitlin (1980) asked of news accounts, "Why this frame and not another?" (p. 7), but Burke (1973) observed, "There is no need to 'supply' [a writer] motives." That motivation, the situation "out of which [a writer] writes is synonymous with the structural way in which he puts events and values together when he writes" (p. 20). As Burke pointed out, the conventional scientific worldview reduces action to motion, thereby removing agency from action. In this worldview things happen according to the laws of

nature, not the agencies of intelligence(s). Hence journalists were compelled to question Mack's claims of his own, and of aliens', agency. Their motives in writing about Mack's abduction research were to shine a light on deviant behavior by a scientific authority but also to cheer on the deviant, "maverick" researcher.

Terministic screens, associational clusters

Burke (1973) asked, what is the underlying imagery through which an agonistic rhetorical contest takes place? One way to look for this imagery is to examine what Burke called terministic screens (see Chapter 3), groups of words employed by rhetors to filter texts, frames of power and act and order affecting the scope and circumference of texts. Burke's (1973) so-called terministic dynasty of power terms include words invoking social, sexual, physical, political, military, mental, and moral power; terms of emancipation, separation, fascination, wisdom, understanding, knowledge. Mack employed a terministic screen of power words in his texts that directed readers' attention away from questions about the absence of physical evidence of abduction, the legitimacy of hypnosis, the validity of the idea of repressed and recovered memory, the lack of peer review, and the extent of publicity and toward his own interests in the nature of knowledge, knowing, and being; the scope, circumference, and function of scientific worldview; and the origin and deployment of scientific authority. This terministic screen extended readers' views outward, to consider possibilities.

Among the "power" terms Mack used most consistently were the words subtle, numinous, profound, fundamental, powerful, shattering. Mack's power screen sorted into

several overlapping and interlinking associational clusters: terms relating to ontology, epistemology, and phenomenology, including the words reality, real, phenomenon, experience, being, meaning, cosmos; a spiritual cluster, including the words subtle, numinous, fundamental, profound, cosmos and cosmic, transcendent, meaning, god; and a cluster of "authority" words, including expert, clinician, psychiatrist, powerful. A couple of randomly selected pages in the last chapter of *Abduction* are loaded with such terms: for instance, "there is evidence that the alien encounters have been responsible for healing…abductees seem to gain powers" or "undergo profound personal growth and transformation" (Mack, 1994a, p. 398); the abduction phenomenon is "transcending" (p. 398), "redemptive" and "transformative," a way to "new realms of psychical awareness…expansion of consciousness or broadening of knowledge…breaking the psychological boundaries that limit our perception of reality" (p. 402). Mack described himself, and reporters described him, as shocked, stunned, and staggered by the power of the abduction phenomenon.

Power and authority constitute a primary news value, and journalists report on who has it and how it is used and abused. As thinkers from Bacon to Foucault observed, power and knowledge are coupled. Journalists writing about Mack's work employed opposing terministic screens that directed readers' attention away from Mack's views and toward their own views on power and authority. The journalistic screens sorted out into several overlapping and interlinking associational clusters as well: a power cluster, including words such as credibility, authority, expert, abduction, rape; a "war" cluster, including the words controversy, criticism, battle, firestorm, rape; and a transgression cluster,

including terms such as rape, probe, implant, alien sex, pseudoscience, supermarket tabloids. The screens they constructed with these clusters functioned to contain readers inside the boundaries of legitimate science, scientific propriety and scientific authority, pulling readers' attention inward to affirm official "knowns." This containment strategy revealed an attitude of conservation, preservation, a motive to protect the boundaries of science and the resources of scientific authority.

Elements of the cluster of power terms that repeatedly appeared in headlines and leads of stories about Mack's abduction research were Harvard, aliens, and sex. Power terms — Harvard, psychiatrist, professor, Pulitzer — appeared in story leads to identify Mack as a scientific authority. Once established as a "normal" scientist, Mack was then associated with deviance in these stories with references to supermarket tabloids, alien rapes, and so on. Mack was constructed as news: a Harvard professor, respected author, Pulitzer, psychiatrist, a scientific advocate with a good academic reputation (Willwerth, 1994). He had authority. But his authority was challenged.

Mack's abduction research was described as shoddy; he was accused of misusing his authority, endangering and even harming people (Willwerth, 1994). He was labeled zany and foolish, operating at the outer limits of acceptable behavior; his work was labeled inaccurate (Willwerth, 1994). Mack engaged in "improprieties," appeared in *People* and on "network TV," was "discredit[ed]" (Kahn, 1994, p. 61). Criticism of Mack was said to be "damaging," scientists were said to be "skeptical," some called his work "nonsense" and it was subject to "ridicule" (p. 61). Mack was labeled the wrong kind of credulous —

that is, "gullible" (e.g. Bernays, 1994; Crews, 1996; Moseley, 1995). He "failed" (Kahn, 1994; Willwerth, 1994). But, in keeping with the journalistic convention of balance, at least some reporters associated Mack and his abduction research (often quoting Mack's own words) with spiritual awareness, interpersonal connection, personal growth, and psychological transformation — *after* highlighting his deviance. One story returned to Mack's own power terms in conclusion with a quote from him in which he invoked spirit, soul, and the sacred (Willwerth, 1994).

Journalists employed a set of power terms clustering around "war" to establish Mack's research as a transgression of boundaries, a flouting of the power of scientific authority to maintain those boundaries; and also to establish Mack as a heroic warrior. Mack was situated in "alien territory" (Tery, 1992, p. 20), where wars are waged and boundaries breached. He was placed "on the front lines" (Tery, 1992, p. 20; also see Rae, 1994) of abduction research (Scribner's said the same on the cover of *Abduction* (Mack, 1994a)). One reporter (Neimark, 1994) placed Mack in "the white hot center of a [raging] controversy...[a] battle about the...nature of the human mind...a war over the nature of memory and access routes to it" (para. 10). Another reporter (Rae, 1994) described the abduction phenomenon as an assault. It was reported that Mack was ripped, attacked, the subject of shots, "heavy groundfire" and a "publicity blitzkrieg" (Kahn, 1994, p. 61).

Related to this war cluster was a cluster of terms of transgression employed by journalists to establish that Mack was violating official boundaries: stories made repeated and prominent references, typically in headlines and in leads, to alien sex, rape, probes and implants, and theft to establish that Mack's research was a violation of scientific

conventions. By emphasizing violation, reporters conveyed the idea of a breach, dissent, disturbance, malpractice, or offense. Some journalists established Mack's work as a violation by characterizing him as a salesman rather than a scientist, with "a hard-eyed huckster's zeal" (Rucker, 1994, p. X2), "marketing the abduction myth" and milking "a cash cow" (Gleick, 1994, paras. 6, 19), perpetrating "a calculated scam" (Gleick, 1994, para. 42). Some focused on Mack's use of hypnosis — his own method of overpowering abductees, as it were, allowing him to probe for repressed "information" (Tery, 1992).

Journalists dramatically opposed Mack's authority and legitimacy to his violations. Among the many popular books about abduction, "none" was written "by an authority with [Mack's] credentials" (Rae, 1994, para. 6). But at the same time journalists made much of Mack's credibility and authority, they also hinted it might be compromised by his association with an "underground" (Neimark, 1994), a "wacko subculture" (Myers, 1995, p. 7). One journalist asked whether Mack might be legitimizing UFOlogy (Neimark, 1994). Journalists also employed a power cluster terms describing loss of power in addressing Mack's authority. They reported on Mack because he had authority and credibility. But some speculated on whether he had gone "crazy" (Rae, 1994) and lost it (control and thus authority).

Mack frequently wrote and spoke of transformation and transcendence, elements of his screen of power terms. Mack described abduction as crossing over from the spiritual into the material realm, transforming from a spiritual to a physical experience, transcending the boundaries between physical reality and what he called the subtle realm. Mack depicted himself as crossing

over, from conventional to unconventional scientific worldview, from skepticism to belief, from science to spirituality, from the known world of everyday life over the threshold into unknown worlds of heroic exploration. “I am a bridge,” one reporter (Willwerth, 1994, para. 16) quoted Mack. Another reporter wrote that Mack was always building bridges between things (Rae, 1994) — psychiatry and diplomacy, physical and spiritual reality.

A spiritual theme

These terms of transformation and transcendence are elements of what I will call the “mother cluster” of terms in this metatext: a “spiritual” cluster of terms Mack used, such as sacred, numinous, divine, and ensouled. Mack employed these terms strategically throughout his texts to reinforce his claim that abduction had spiritual as well as scientific implications.

Some journalists made note of the spiritual bent of Mack’s abduction research. The *Boston Herald* (Dykes, 1994) deemed *Abduction* “a transcendent, landmark work that is finally less about alien phenomena than about realms of spiritual emergence” (p. 46). According to *Psychology Today*, Mack was constructing a new kind of cosmology by melding ideas drawn from Eastern spiritual traditions as well as Western science (Neimark, 1994). Out on the fringes, *UFO Magazine* (Miley, 1994) noted that “where Mack’s book differs from others of its kind...is in its marked spiritual orientation” (p. 34). However, few journalists explored Mack’s linkage of science and spirit. Mack himself distinguished spirituality from religion. In one rhetorical attempt to do so he dramatically opposed his own conception of a transcendent, transformative, “cosmic” spirituality to

restrictive dogma by describing science as a sort of religion that had acquired "the rigidity of a theology" (1994a, p. 20), reinforcing the authority of this claim by quoting the words of Kuhn to make it. But some writers were compelled, nonetheless, to defend the demarcation between science and religion against Mack's transgression. They decided Mack's claims blurred that sacred boundary, and they rebuked him, in one case with dire warnings about consequences (e.g. Miles, 1994; see below).

One reporter quoted Mack saying that the broader worldview he was advocating would provide access to sacred and divine realms (Daniel, 1994). Mack was quoted claiming that in abduction, "God has sent scouts…aliens are emissaries of the divine" (King, 1999, p. A11). Mack talked with another reporter (Lawler, 2001) about "a science of the sacred" (para. 14) and the idea of abductees as sacred witnesses. Another journalist wrote that Mack had had a "revelatory" experience regarding "the boundary constraints [of] psychoanalysis...plunged into Eastern philosophy and shamanism [and] emerged from these explorations with a different worldview" (Rae, 1994, paras, 16-17). One reporter (Tery, 1992) quoted Mack describing abduction thus: "'it's like you're humbled before God...oh, my god, what an extraordinary thing...has happened'" (Tery, 1992, p. 22); this reporter wrote that Mack had faith that people would accept what he was doing. One journalist wrote of Mack's vision, described him as a seeker and said he was always on a quest that sometimes took him down "heretical paths" (Rae, 1994, para. 13). This journalist said Mack was possessed, spoke of gods and spirits and was "almost mystically detached" (para. 37) from criticism of his views. Another reporter (Neimark, 1994) called Mack "a high priest...seeking God" (para. 1), "a high priest at a most sanctified temple of science" (para. 32), a

"paterfamilias and healer" (para. 1), "a man with a halo of perfection" (para. 32); abductees were described as "spiritual seekers" (para. 3) who "flocked to him" (para. 2).

Mack employed the metaphors of cosmos and the profound to conjure the highest, farthest, deepest, strangest reaches of reality, the unknown and perhaps unknowable. For Mack, the profound was worthy of serious contemplation. And thus his contemplation of it was profound. Journalists, on the other hand, metaphorically placed abduction in the realm of supermarket tabloids and science fiction.

For journalists, peer review, approved methodology, proper data and physical evidence stood in for scientific authority in their stories about Mack's abduction research. Mack identified, and was identified, with the scientific establishment, and journalists used Mack himself, and Harvard, too, to stand for that establishment. Mack represented Harvard's scientific authority, and Harvard represented the cultural institution of scientific authority. White, male, a graduate and a faculty member of Harvard and an M.D. to boot, winner of a prestigious prize, and an over-achiever, Mack epitomized the authority of science. By dramatically opposing the very real Mack, the prototypical scientific authority, with unreal aliens, the ultimate threat to scientific authority, journalists created conflict, the stuff of news.

Journalists made Mack a scapegoat for any and all perceived threats to the boundaries, the authority, of science, especially focusing on the threatening idea of repressed and recovered memory. The underlying imagery through which the agonistic trial took place

in stories about Mack was an imagery of violation, trespass, transgression, rape, betrayal, sham. Journalists metaphorically depicted Mack's abduction research as a rape, with references to probes, implants, and hybrid babies. Examined from a slightly different perspective, however, those violations were heroic leaps across the boundary between the known and the unknown….

A meditation on meanings…

For the purposes of this analysis it is worth probing some of the components of Mack's and journalists' screens and clusters to think about the scope (range) and circumference (limits) of meanings they might convey.[1] The word "power" conveys strength or force, authority and control. The power term "profound," a word Mack used frequently to describe the abduction phenomenon, derived from the Latin *profundus*, "before the bottom," means deep, coming from a great depth. Used as a noun, "profound" means the deep, the sea, the abyss — a terrifying, unknown source of power. The meanings that "profound" conveys range from intellectually deep to deeply felt, far-reaching, unqualified and absolute, pervading, overmastering, and deeply humble, lowly and submissive.

Related to "profound," and serving as a synonym for it, is "fundamental," another word Mack used frequently in describing his abduction research. "Fundamental" derives from the Latin *fundus*, meaning "bottom," and the English word "mental," meaning "of the mind" — primarily the intellect, as opposed to the emotions. "Mental" can also mean crazed — that is, intellectually diseased. The meanings of "fundamental" range from

basic, central, key to foundational, underlying, primal, rudimentary, structurally essential, systemically necessary, "of great significance or entailing major change." Related to "profound" is "subtle," another term Mack used frequently, deriving from the Latin *subtilis*, meaning fine or thin. "Subtle" means slight, barely detectable, or even unseen. It also can mean abstruse, hard to understand; or sly, clever, crafty, devious, insidious, treacherous.

In communicating about his abduction research, Mack often brought up epistemology, ontology and phenomenology — the studies of knowing and knowledge, being, and perceiving. He was crusading for an expanded epistemology, new cognitive maps of reality. It could be argued that these three terms are irreducible: an entire online database of thesauri yields no synonyms for epistemology, ontology or phenomenology (though ontology is offered as a synonym for philosophy). Yet "phenomenon," the root of phenomenology and the label Mack chose for abduction accounts, has dozens of synonyms, with denotations and connotations spreading over such a wide range as to render the word meaningless, or meaning anything and everything. "Epistemology" typically refers to the philosophy or study of the nature of knowledge, what counts as knowledge, how knowledge is acquired and legitimized. Its root is the Greek word for knowledge, *epistem*, deriving from *epistasthai,* to understand, and *histasthai*, to place or determine. To know something, then, is to locate it somewhere – say, on a cognitive map, somewhere in one's worldview or one's cultural landscape — and to understand it in that context.

Mack (2000a) wrote of the blurring of "boundaries [between] fantasy, metaphor and actuality" as if it were a fact, a fact creating a need for "newer descriptive words" (p. 19). "Ontological and linguistic categories," he said, "fall so short as to leave us gasping for new words" (p. 19). Ontology is typically defined as the philosophy of the nature of being. Ontology appears to derive from a Greek word meaning "the things which exist." Mack said abductees experienced "ontological shock" (1994a, p. 26) upon accepting their abduction experiences as real experiences, some sort of contact with an unknown reality that required them to redefine the boundaries of what had previously constituted reality in their worldview. Ontological shock is a philosophical term for the experience of becoming aware — or altering one's awareness, in this case — of the nature of being or reality.[2] This remapping of worldview, Mack claimed, required a concomitant remapping of one's conception of self, identity, in relation to the world (or cosmos).

"Phenomenology" is typically defined as a philosophy positing that reality consists of objects and events as they are perceived or understood in human consciousness and not of anything independent of human consciousness. More simply, phenomenology can also refer to a description, history, or explanation of phenomena. The term has a specific medical definition as well: "the way in which one perceives and interprets events and one's relationship to them in contrast both to one's objective responses to stimuli and to any inferred unconscious motivation for one's behavior...a psychology based on the theory that phenomenology determines behavior." Mack employed this term in a way that appeared to blend elements of the philosophical and medical definitions.

As compared to the relatively clearly defined phenomenology, its root word "phenomenon," as noted above, has dozens of synonyms and a conflicting plethora of meanings. The root of phenomenon is the Greek *phainomenon*, from *phainesthai*, "to appear." A phenomenon is typically defined as an occurrence or fact perceivable by the senses, "a fact or event of scientific interest susceptible of scientific description and explanation." Another common meaning of phenomenon is an "unusual, significant, or unaccountable fact or occurrence; a marvel." Synonyms for phenomenon include: abnormality, accident, adventure, anomaly, apparition, chance, delusion, display, event, exception, experience, fantasy, hallucination, happening, illusion, materialization, meaning, miracle, paradox, peculiarity, quirk, rarity, reality, revelation, show, sight, sign, spectacle, symptom, thing, wonder. Considering the range of meanings embedded in "phenomenon," including "meaning" itself, it is no wonder why Mack was so fond of the word. It provided plenty of room for exploration and interpretation of abduction. It is also clear in the metatext examined for this analysis that for others, "phenomenon" had a more limited range of meanings, restricted to the realm of physical reality perceivable by the senses.

In communicating about abduction, Mack kept the epistemological door open by employing a cluster of terms to maintain an attitude of ignorance: he insisted on "not knowing," he repeatedly called himself "naïve" and "innocent." Derived from the Latin *natives* — meaning innate, natural, native — "naïve" ranges in meaning from natural, unaffected, guileless, and artless to simple and unsophisticated to credulous and lacking critical judgment. For Mack, "naïve" meant unaffected, guileless; for journalists, it meant

credulous, uncritical. Some journalists accused him of being credulous, publicity-hungry and profit-driven (e.g. Gleick, 1994; Rucker, 1994). Both "credibility" and "credulity" convey meanings about belief and thus inject ambiguity into journalists' texts. Credibility is the quality, capability, or power to elicit belief; reliability or trustworthiness; or a capacity for belief. The Latin root of credibility is *credere*, "to believe." Credulity is a disposition to believe too readily. The Latin root of credulity is *credulitas*, derived from *credulus*, derived from *credere,* "to believe." For journalists, Mack's scientific credibility was reliant on his cultural authority, typically defined by the Harvard-psychiatrist-Pulitzer triad of terms. "Authority" is the power to enforce laws or exact obedience; to command, determine, or judge; power to influence or persuade resulting from knowledge or experience; "confidence derived from experience or practice"; self-assurance. An authority is an accepted source of expert information or advice. The Latin root of "authority" is *auctor*, meaning creator. Mack presented himself as an authority — and while journalists questioned that authority, in the end they did not, perhaps could not, demolish it.

The word "belief" played an important part in the metanarrative of Mack's abduction research. Mack "believes the experiencers, even if he can't explain…what they experience," one reporter wrote (Thompson, 1994, p. 4A). For journalists, what Mack thought about abduction became what he believed about abduction. Belief means the acceptance of, or a conviction in, the truth, actuality, or validity of a thing — an idea, a claim, a phenomenon. Definitions of belief range from "any cognitive content held as true" to "a vague idea in which some confidence is placed"; "assent to a proposition or

affirmation"; "the acceptance of a fact, opinion, or assertion as real or true, without immediate personal knowledge"; confidence in the senses. (The legal definition of belief is acceptance of the truth of something based on consideration of "the evidence.") Synonyms for belief range from faith or doctrine to expectation or outlook to hope, assurance, and, most importantly, truth. "Truth" derives from the Old/Middle English *treowthe* or *trewthe*, meaning loyalty. Truth can mean conformity to fact or actuality; a statement proven to be or accepted as true; sincerity; integrity; conformity to rule. The root of truth and the root of trust are related, and the meaning of trust is linked to the meaning of belief. Trust is reliance on — belief in — the integrity, ability, or character of a person or thing. To trust in something is to have *faith* in it.

Mack linked his abduction research with all of his previous — that is, all of his sanctioned, published, recognized, authoritative — work with the word "identity." The "alien" in abduction is the dark side of identity, the Other. The Latin root of "alien" is *alius*, meaning other. The most common meaning of "alien" is foreigner, an unfamiliar person. (The Latin root of "foreign" is *foras*, meaning outside. Foreign typically means from another place; it can also mean not natural or not relevant.) Alien can also be used as a verb to mean "surrender." Mack repeatedly said his primary interest — scientific, therapeutic, personal, professional – was identity. He was quoted by one reporter saying abduction had "implications for...our identity as a species" (Tery, 1992, p. 22). He was quoted by another saying "the abduction phenomenon...gets to the core of who we are," putting humanity "into a different universe" (Neimark, 1994, para. 11). But while a few reporters explored Mack's interest in identity, none made an explicit link between

identity and abduction. This key word, "abduction," derives from the Latin *abducere*, to lead away. In this case abduction was a leading away, from the familiar physical world for abductees, from the conventional scientific worldview and its physical limits on reality for Mack, from the boundaries of legitimate scientific knowledge for journalists. In common law "abduction" has a specific meaning: taking away a girl or woman without her consent for the purpose of marriage or sexual intercourse. Mack associated abduction with transformation and transcendence. Journalists associated it with forcible sex, physical violation, transgression.

The term "sacred" is a good place to start in exploring that "mother cluster" of spirituality terms. Sacred commonly means dedicated to worship of a deity. It can also mean dedicated to a single person or purpose, worthy of respect, not profane or common. The root of sacred is the Latin *sacrare*, from *sacer*, meaning holy and also meaning cursed. For Mack, things sacred were things not corporeal, not rational, not known. Perhaps journalists found Mack's things sacred somehow cursed because they were not known. Journalists are supposed to know; their cultural authority depends on it. They expect scientists to know, too; it is the source of *their* authority as well. Mack's term "numinous" derives from the word numen, meaning a spirit of place, objects, or natural phenomena; numen can also mean creative energy or genius. Numinous means supernatural, spiritually elevated, divine. (The Latin root of these words is *numin*, meaning a nod of the head….) Mack's term "ensouled" means endowed with a soul; placed, received, or cherished in the soul. The origin of "soul," from which ensouled derives, appears to be as uncertain as current understanding of "soul" appears to be….

Conventions and interests: more on core texts

A few core texts published in top-tier elite media are analyzed in greater depth here to explore further the rhetorical ambiguity that characterized this case. Information I gathered in interviews with some of the authors of these texts (See Appendix B) sheds light on how journalists' personal and professional values and beliefs can distinguish their stories and how editors and sources can influence story content and structure. (I should note here that my findings in each of these interviews were both predictable — for instance, in revealing how journalistic conventions drove the framing of stories — and unexpected — in showing how individual as well as professional interests can affect media content. I also should note that the fact that I identified myself as a former journalist as well as an academic researcher when arranging these interviews may have affected how both journalists and scientists responded to my questions.) These detailed analyses are especially revealing of how the everyday world of conventions and routines is intertwined with the symbolic realm of meaning making.

Freelance writer Sara Tery, author of the *Boston Globe's* Sunday magazine profile of Mack, is a former staff writer for the *Christian Science Monitor* who also has written for *The New York Times Magazine*. In an interview with me (see Appendix B) she said she specialized in cultural criticism. Her assignments from the *Globe* magazine were typically stories she pitched to the editor, she told me, but in this case it was the editor who pitched the Mack story to her. This editor did not have a particular take on the Mack story and wanted Tery to explore it. "I think there was something unique to my

personality" that made it possible to communicate well with Mack — perhaps the fact that she was a Christian Scientist, Tery proposed. "I've lived a life where things deemed physically impossible" are accepted as possible — healing, for example. "I've seen cases where disease was present, and then it was gone – I can explain it to you…but it requires a basis of reasoning that is spiritual." She said skeptics of Christian Science healing techniques had not examined them. She told Mack about her Christian Science background in the course of their interview. "I had a real sense of conscience, almost a moral concern" about the way she would treat the subject of Mack's abduction research. "I wasn't going to do a rah-rah piece," she said, but she was "willing to hear what he had to say," and she told Mack she thought he had a right to tell his story.

Mack was wary of reporters, Tery said, and told her he would not talk with her if she planned to interview skeptics who had been criticizing his abduction work; Mack claimed none of them had looked at the research and therefore should not be commenting on it. Her editor, however, told her that she needed to include some skeptical views in her story. She told Mack about this directive and agreed to find an "agnostic" expert source to talk with. "I thought it was a far more interesting way to tell the story, to find someone who was being persuaded" rather than someone who flatly rejected Mack's work. Tery ended up quoting Harvard's Edward Khantzian as an expert source, for balance. "I did call" some of Mack's critics, Tery said, and she found they had not read anything about Mack's work; she observed that she thought it wasn't fair for these critics to disguise uninformed opinions as scientific assessments. She told me she was sensitive to the fact

that she was writing her story for an elite media outlet and knew the sources that she cited might subsequently be used by other journalists as authoritative sources.

"This man's a psychiatrist," Tery said, and "I think he deserved a fair hearing…not to be ridiculed." She said she believed Mack believed something had happened to abductees, "and conventional science didn't explain" it. Science doesn't have all the answers, she said; there is an "arrogance to the idea that we know everything." Tery said her father, who worked with the U.S. space program, used to tell her that he thought it was incredibly arrogant for us to think we were the only intelligent life in the universe. She described Mack's work as "symptomatic of the post-Reformation movement in thinking and science and reason" and said, "I think John Mack's work frightens the people who draw the cloak of scientific authority around them." She told me she felt "very proud about keeping an open mind" in writing the Mack story, avoiding the knee-jerk, right-wrong, approach to considering the reality of abduction. (The far more interesting issue, she added, was whether Mack was making people change their minds.) She said she probably would not have accepted an assignment to write about a lesser figure in abduction research, say, Budd Hopkins. Mack loved the article, she said. "There's probably a lot in that article that's directed to my own feelings about science and the search for truth," she acknowledged, and she told me she believed her article helped set the tone for future media coverage of Mack. Perhaps Tery did set the tone for other coverage, given that her story framed Mack as a stereotypically heroic scientist, a lone explorer on a quest into unknown, "alien territory," as the headline of her story called it.

Writing to a different audience, freelancer Jill Neimark (1994) structured her story about Mack for *Psychology Today* as an in-depth examination of the validity of the idea of repressed and recovered memory and the method of hypnosis. Her story was also an epic tale about the yet-unfinished journey of a heroic figure. Following a tradition in science journalism, Neimark heroicized Mack as a scientist and a spiritual leader: she framed him as one of Harvard's best and brightest — a significant claim given Harvard's high status in elite science, "a high priest at a most sanctified temple of science: Harvard Medical School…a high-profile idealist…a man with a halo of perfection about him, an honorable man given to just causes, a man with reputation for kindness" (para. 32).

While my efforts to obtain an interview with Neimark were unsuccessful, her journalistic *oeuvre*[3] reveals something about her interests and hints at why she may have approached Mack as she did in her story, and perhaps even why she took on the assignment. For *Psychology Today*, Neimark has also written about Harvard sociobiologist Edward O. Wilson, dreaming, the psychology of memory, and psychologist Elizabeth Loftus (Neimark, 1996) (whom Neimark tagged "the diva of disclosure," an expert on "memory's malleability…stand[ing] at the highly charged center of…the war over memory" (para. 1)). Neimark has also served as a contributing editor for *Science & Spirit* magazine.

In her story on Mack, Neimark appeared less interested in his abduction research than in what she characterized as the "furor" it had generated among other scientists involved in what she called "a war over the nature of memory, and access routes to it, particularly

hypnosis" (para. 9) — a furor she herself was helping to construct. She placed Mack in a battle, but she made him somehow bullet-proof: "he shrugs off the controversy" (para. 11), responds to protests with a "helpless shrug" (para. 53) and displays "an almost bedazzled helplessness" (para. 14), she wrote. As she further explored this alleged furor, Neimark engaged in some obvious boundary-work by marginalizing hypnosis as a scientific method, reporting that Mack's use of the method "enrages some psychologists, because it opens a very dark Pandora's box" (para. 42). In keeping with this murky metaphor, Neimark ended her text with ambiguity: the flawed hero of her story had not been able to complete his journey and bring back the knowledge we need, she concluded, "even though he could" (para. 60). Neimark said "the issue is not whether Mack is right or wrong, but that he has abdicated scientific objectivity" by adopting methods that "preclude...getting an answer" (para. 50). While Neimark did not explain in her story how Mack "could" solve the mystery of abduction, readers might reasonably conclude that this "high priest" should possess the tools to do the job.

Neimark took a superficially critical stance in her story, maintaining the posture of a proper journalist. She criticized what she called Mack's unabashed bias, but she was intrigued by his exploration of the borderlands where science and spirituality make contact, and ultimately she depicted Mack as a heroic figure. Embedding him in the upper echelons of the scientific establishment, she wrote that Mack is not "your garden-variety shrink" and said he compared himself with "Simmel's...'Stranger,' the marginal man who participates in the culture but is not part of it" (para. 16). She described Mack's tenure at Cambridge Hospital as a "major departure from the beaten track" (para. 18), his book

about Lawrence as “another departure” (para. 19), and she cited other examples of what she depicted as departures from scientific convention, including his involvement in “nuclear disarmament, global peace, and conservation” (para. 20), his interest in “alternative approaches to consciousness” (para. 21) and his “final break with tradition” (para. 21) — using holotropic breathwork as a method of recovering repressed memories. She thus set the stage for abduction research as a logical next step in his heroic journey.

Mack was “now an explorer of consciousness, at play in the fields of the universe” (para. 26), Neimark wrote. She quoted Mack: “’Some other intelligence is reaching out to us. It’s the most exciting work I’ve ever done.... I’m shocked in a way to hear myself saying such things. But I’ve been as careful as possible to exhaust conventional explanations’” (para. 5). Neimark associated Mack’s foray into abduction research with a spiritual quest, “seeking God” (para. 2), and she linked it to “a battle...a war over the nature of memory” (para. 9), locating his work in a place where heroic acts typically take place.

Stephen Rae’s (1994) profile of Mack for *The New York Times Magazine* was superficially a tart critique of a flaky scientist with a questionable agenda. But the underlying story appeared to be, like Neimark’s (1994) story, a sort of heroic epic. Rae’s story opened, like many reports on Mack’s research, with an account of abduction laced with terms of sexual violation. It quickly zeroed in on Mack’s transgression of the boundaries of objective scientific knowledge: Mack’s interest in abduction stories “would not have caused a stir. Except that he believed them” (paras.4- 5). In this story “the tapestry unfolded” (para. 2), leading readers through the looking glass, as it were, into a

world of weird science. Rae identified Mack, the protagonist in this drama, as a character worth watching: a man "with credentials," (para. 6); a diplomat, do-gooder (para. 11), "emerging activist" (para.); a "quixotic figure" (para. 9) (noble, idealistic and impractical); "a seeker" (para. 11) on a "quest" (para. 12) down "heretical paths" (para. 12). Rae placed Mack on stage, then, as a larger-than-life figure on a mythical journey of departure, from the institution of psychoanalysis and the conventional boundaries of science; initiation, into unfamiliar realities and spiritualities; and return, or emergence from his explorations with new insights.

"Mack is increasingly being compared," Rae reported (though he did not specify where or by whom) "to Timothy Leary, who gave LSD for homework and was dismissed from Harvard" (para. 29). Rae noted that at times Mack's "colleagues...feared he had gone mad" (para. 8) and that Mack was "predisposed to seeing entities" (para. 18). He reported that an anonymous "friend" had called Mack's work an "obsession" and "raise[d] the specter of Wilhelm Reich, the psychiatrist whose notions about orgone energy destroyed his career" (para. 31). Rae described Mack's methods of holotropic breathwork and hypnosis as "us[ing] Eastern breathing techniques and percussive music to produce LSD-like changes in consciousness" (para. 14) and helping people "recover memories in...screamathons" (para. 23). But in tandem with this critique, Rae, like Neimark (1994), framed Mack as a man on a spiritual quest. He reported that Mack had "plunged into Eastern philosophy and shamanism" (para. 16) and quoted a colleague of Mack who had described his abduction research as "'part of an ongoing search that he's had for issues he defines as spiritual'" (para. 28). Toward the end of his story Rae quoted an alleged

abductee: "'Did John's spiritual bent affect all of us, or did our experiences influence him?… Is it real?…. How much of my memories are real?'" (paras. 48-49). Rae declared early on in his story that it was a "given that Mack's 'Abduction' is likely to obscure all his past accomplishments" (para. 11). But ultimately he constructed a text that highlighted rather than obscured Mack's achievements and left readers in the end with an image of Mack moving forward— still a Harvard expert, still doing research, still on a quest — and an image of abduction claims as questionable but not discredited.

In an interview with me (see Appendix B), Rae, a freelance writer, disclosed interests that influenced his choice of subject and his treatment of it as well. "I'm drawn to fringe subjects and write a lot about cults," he said. "I also write on psychiatry…. I broke into print with a funny 'My Turn' column in *Newsweek* and two op-ed pieces in the *Times*, so I have a strong voice and sense of humor, which I try to bring to all my reporting…. I'm a generalist with a science sideline." Rae said he had written many stories about psychology and psychiatry, "especially aberrant psychology…. I don't know if I'd call it an expertise, but I have a background in delusional thinking. I'm fairly well versed in the literature of false-memory syndrome. I…read medical journals, including those of psychiatry." Rae told me he had "always been interested in UFOs. It seemed to me that everyone who claimed to have seen one — including police officers and pilots — couldn't all be hallucinating, or seeing the planet Venus…. They didn't like to talk about it, but a cousin's parents saw something in their…yard that left a burnt circle of earth. These are not flakey people…. I thought that, given my sympathies, I could write a fair

story. I never thought of it as a 'science' story." He said he had written about abduction before, in an article for *Cosmopolitan* on what he called "psychic trends."

"I was at Harvard in the days after Timothy Leary, and I'd heard about Mack's work," Rae said. "I wondered how staid Harvard was dealing with him. I suspected I'd find conflict, always good in a story, and a colorful central character in Mack." Focusing on Mack in a story pegged to the publication of *Abduction* "could be a good way to upscale the whole UFO abduction phenomenon for the *Times*." Rae said he chose his sources for his story through personal contacts and suggestions from Mack's staff. "One of the most telling things to me as a reporter was how many of the people Mack steered me to wouldn't talk to me," he noted, "and I was persistent…. I knew I'd need to speak with a debunker, so I called Philip Klass, whom I think I'd interviewed previously…. I knew I had to speak with psychiatrists, including those in the field of false-memory syndrome. Carl Sagan had written about UFO abduction [in *Parade* magazine] and knew Mack, so it made sense to call him." Rae told me he mapped out his story in consultation with an editor: "you have to introduce Mack. You have to present his work, hopefully with a human face. You have to show others in his department at Harvard and the larger world responding to his work…. You have to quote his bosses at Harvard. You must raise the issue of academic freedom, you need the voice of an abductee who claims to have been helped by Mack. And then you have to put Mack in a larger context. Once you have the outline, it just becomes a matter of filling in the best data…. I had a lot of trouble focusing my material, my editors were very demanding, but ultimately…the story read as

I'd intended — with fondness and charity, I think, toward Mack, if leaving the reader with the idea that he may have taken too much LSD."

Boston Globe staff reporter Joseph Kahn (1994) wrote a story for his paper on the publicity Mack was receiving for *Abduction*. The *Globe* assigned him to write this story, Kahn said in an interview with me (see Appendix B), because Mack was a high-profile local figure in the Boston-Cambridge community, attached to high-profile Harvard, and "there was a buzz around Mack's book." The paper likes to cover local authors before they get a lot of publicity elsewhere, he told me. Kahn said he reported for the "living/arts" section of the *Globe*; he did not cover a specific beat but did do a lot of author interviews. He also noted that he often takes a whimsical or skeptical view in his stories; he called it his personal style. Kahn said his editor asked him if he wanted to do a story about Mack, and "I know a little bit about the subject" of abduction because "I know Budd Hopkins," he told me, through family connections. Kahn said he had not written about Hopkins' work with abductees but had talked with Hopkins about it. He said his mission in writing the Mack story was to take Mack's book seriously but skeptically.

Kahn told me Mack took the stance that he believed abductees believed they were abducted; "sounds great," but Kahn wondered whether this was the sort of help these people needed. He considered the possibility that Mack's research might be "junk science," benign or otherwise. "One of the things that intrigued me" about both Hopkins and Mack, Kahn said, was that they had made their reputations through other endeavors

(art for Hopkins) before they began working with abductees. "They didn't need this" to validate themselves as professionals. Kahn told me he had read *Abduction* before interviewing Mack. At the time of that interview, *Time* had not yet published its Mack story (Willwerth, 1994), and Kahn said neither he nor Mack knew it was about to come out. After the *Time* story was published, Kahn interviewed key *Time* source Donna Bassett and author James Willwerth and talked with Mack again to update his story before publication. (While many other journalists cited *Time's* story in critiquing Mack, Kahn alone quoted Willwerth as well as Bassett in his story.)

Kahn told me he thought it significant that Bassett found Mack gullible enough to accept her phony abduction story. He recalled that someone at the *Globe* might have known Bassett's husband and helped track her down for an interview. His editor's most noticeable influence on his story, Kahn said, was the direction to cover *Time*'s story in it. "I didn't think that that I was writing a negative piece," he said, but he indicated that if he had a chance to do it over again he might shade some things in the story more sympathetically or cynically. Kahn said he did not write the headline ("E.T. phone Harvard…") for his story. "To my surprise," Kahn said, Mack's PEER group liked his story and invited him to participate in a panel discussion with Mack and a local TV reporter on media coverage of abduction research. "It went okay"; the event was open to the public but did not draw a big crowd, he told me.[4]

Boston Herald staff reporter Stephanie Schorow's (1997) story on Mack reflected the contrast between the *Herald*'s style and the *Globe*'s style and also her own personal style

and interests. In an interview with me (see Appendix B), Schorow said she was a former Associated Press reporter and a soft-news writer, not a science writer, at the *Herald*. In her story Schorow framed a local event billed as a "dialogue" between Mack and Budd Hopkins as a conflict. The *Herald* headlined the event as a "battle of the UFO titans"; Schorow introduced it as "a close encounter of the academic kind" (p. 1). In our interview Schorow said she had been assigned to report on this local event "to fill a hole" in the *Herald*'s Sunday edition; her editor had decided "it looked like a *Herald*-esque story." (Her story ran on page one.) She told me she had always been "fascinated" by "this stuff" – aliens and UFOs; she mentioned that her office was full of UFO books, and she described the UFO phenomenon as thoroughly ingrained in contemporary culture. While attending Northwestern University, she told me, she had taken a "stars for jocks" course taught by astronomer and UFOlogist J. Allen Hynek (the well known head of the Center for UFO Research at Northwestern — see Chapter 7). Hynek had finished up that course with a lecture on the UFO phenomenon, she said, noting that she had "loved" the course. "I do a lot of wacky stories," she said; "I've developed this reputation" based on an interest in science fiction and 'Star Trek'."

In journalism, Schorow told me, "you risk ridicule from your colleagues unless you inject a note of skepticism in what you write." So she took a skeptical stance toward the Mack-Hopkins event, according to convention, and a humorous stance, too, according to her own style. She said she had heard a lot of joking about the conference so she felt okay about making her story amusing. It was a feature, not news, so it had to be "readable," she noted.

Schorow also told me that at the *Herald*, "we always like to dig Harvard." She said she was looking for a different angle on this story, not the standard are-they-real-or-are-they-not angle; she decided the difference of opinion between Hopkins and Mack was worth focusing on. "What I tried to do was give a fair shake to each person's position…to present what I saw there" and interpret it. Hopkins is not a scientist and he has no objectivity, Schorow said; Mack believes abductees have had real experiences, and "I don't see why we can't give [Mack] the benefit of the doubt."

Two key reviews

I am examining reviews of *Abduction* published in the *Boston Globe* (Miles, 1994) and *The New Republic* (Gleick, 1994) at length in this analysis because Mack singled them out for response in the revised paperback edition of *Abduction*. These texts (see Appendix C) were key rhetorical moments in The Case of the Deviant Doctor. The book review format freed their authors from the constraints of a variety of journalistic conventions — the standard who-what-when-where narrative structure, the requirement of objectivity, the need for fair and balanced treatment. The moral of Gleick's review was that Mack was a dangerous player in the memory wars and had to be stopped. Miles's moral was that Mack was doing a dangerous deed by blurring the boundary between science and religion. Both had plenty of complaints about Mack's book (and both excoriated his writing style), but what they were primarily concerned about was Mack's authority, or more precisely what they perceived to be his abuse of it. Gleick's review, taking the form of a victimage ritual, receives special consideration, as it calls out for a comic corrective.

For the *Globe*'s music-critic-turned-book-reviewer Milo Miles (1994), Mack's *Abduction* was worth writing about because Mack had credibility. In his first paragraph Miles associated a cluster of credibility terms with Mack: "reputation," "top Harvard psychiatrist," "Pulitzer Prize," "among the most prestigious authors to champion extraterrestrial visits as factual," "his studies of nightmares...revered among professionals," "founded the psychiatry department of [Harvard's] Cambridge Hospital" (p. B15). Miles rebuked Mack for engaging in memory recovery, acting more like a guru than a psychiatrist, and blurring the boundaries between science and spirituality, objectivity and subjectivity — all unacceptable activities for a legitimate, let alone elite legitimate, scientist. For Miles, Mack's "crossing over" (p. B15) was a transgression. Standing on the wrong side of the tracks dividing science and non-science, Mack "relies on no more valid evidence than a supermarket tabloid would," Miles argued, "immediately tosses logic and science overboard" and just as casually "breezes past the issue [of "furious controversy" over repressed memory and "brushes...aside...earthly explanations" (P. B15). In the penultimate paragraph of his review, Miles stated the purpose of his text: to censure Mack for violating the sacred boundary between science and religion. "The secular world and the spirit world must be kept as separate as church and state in a free society," Miles wrote. "Lucid reasoning is endangered," and "the post-scientific subjectivity [Mack] advocates is so slippery it could just as easily become a tool of fear and violence as of spiritual unity." Miles concluded, "Mack should beware that if rationality and objective truth are thrown out the door, no one can predict what will rush in" (P. B17).[5]

In his 4,612-word review of *Abduction* for *The New Republic*, James Gleick enacted a rhetorical victimage ritual disguised as a book review. Gleick has journalistic authority: he made his reputation as a science writer for *The New York Times*, and, like Mack, he is a graduate of Harvard and a best-selling author (see Chapter 5). He deployed his cultural authority to propel the polemic he constructed, condemning Mack for his trespasses of the boundaries of science. He rejected Mack's worldview, methods, and claims about abduction, identifying himself, and thus his readers, with legitimate, rational science and scientists and identifying Mack and his abduction research with an oppositional, irrational community of "alien abduction mythology," "anti-science cults," "tawdry belief manias," "paranormals...crystal healers [and] psychic crime solvers" (para. 5). Gleick began his polemic with a story about gullible "Marks" and street-wise "Smarts" to establish that "Smarts know" and "Marks believe" (para. 1) and to declare Mack a Mark posing as a Smart (and, by implication, himself an outright Smart). He concluded his polemic by observing that "by and large, the Smarts aren't interested in arguing with the Marks" (para. 48)— which is what he himself appeared to be doing in his text. Gleick made Mack worthy of attack by noting that he had "authority" (para. 20). Gleick framed Mack as a questionable authority by avoiding direct recitation of Mack's credentials, identifying him only "as his book jacket labels him" (para. 2). Gleick framed Mack as a scientist who was engaging in theatrics rather than science and an authority who was breaking rather than enforcing the rules.

In this polemic Mack stood for Harvard's scientific authority (in addition to criticizing Mack's abduction research, Gleick also criticized him for putting "his Harvard Medical School imprimatur" (para. 18) on the results of a 1991 Roper poll about abduction), and Gleick made himself and his readers victims of Mack's breach of his responsibilities as a scientific authority. Gleick charged Mack with violating numerous social contracts: with the science community, tasking him with reinforcing its sanctioned conception of reality (what Mack himself called consensus reality); with journalists, the public, and even his own clients, requiring him to provide "expert" facts and truth. Mack's failures to live up to these contractual responsibilities rendered "all of us more vulnerable to faith-healers and Holocaust-deniers" (para. 5), Gleick wrote.

In his review Gleick created a screen of power terms associating Mack with authority, Harvard, status, medicine, "professional trappings" (para. 20) and the Pulitzer Prize. He then constructed an opposing screen of power terms, conveying the idea of violation, to direct readers' attention away from Mack's authority and toward what he argued was Mack's transgression of the boundaries of legitimate science, his "blurring [of] distinctions between real knowledge and phony knowledge" (para. 5), his breach of authority, even his violation of the Hippocratic oath to do no harm. In constructing his victimage ritual Gleick employed two key interlinking associational clusters, making Mack and his abduction research theater — a sham — and also a violation — a shame. He dismissed Mack's work as fiction, mythology, entertainment, demarcating it from science; and he deemed Mack a fake — a gullible believer posing as an expert, a theatrical performer posing as a scientist.

Gleick censured Mack for reporting his research to a mass-market audience, talking about it on "Oprah" and "48 Hours" and "in supermarket tabloids" (para. 4) — making it theater, not science. He accused Mack of attempting "to cash in" (para. 8) on popular interest in aliens. And he dismissed Mack's use of hypnosis as theater, not science, calling it "a fringe practice...as useful to carnival magicians and moviemakers as to clinical psychiatrists...a conspiracy between hypnotist and willing subject" (para. 26). Gleick peppered his victimage ritual with references to sexual violations reported in abduction stories: "extraterrestrial sex abuse" (para. 31), "harrowing descriptions of rape and torture" (para. 36), "cosmic rapists," (para. 3) "gangs of alien sex abusers" (para. 8), "little gray rapists…galactic sex crime" (para. 9), "the one-sexual-fantasy-after-another-as-told-to-me genre…sex in a 'pod'" (para. 22), and so on. He accused Mack of invading clients' minds by implanting traumatic memories under hypnosis, and he used images of sexual violation to highlight his concerns about Mack's claims of recovering repressed memories. In this victimage ritual Gleick made Mack's work akin to rape by claiming the probing of memories violated clients' privacy, safety, security, identity and mental well-being. He censured Mack for numerous violations of scientific standards of evidence, methods, and corroboration, coupling these transgressions of the ethos and the boundaries of science with yet more images of sexual violation.

In constructing Mack's research as non-scientific, Gleick drew the boundaries of what he considered legitimate science. Mack "doesn't provide information about his hypnotic techniques," Gleick wrote, and:

> Provides no data from psychological tests.... There is nothing remotely resembling a control...no explanation of how he selected [his] case studies...it's never clear where Mack finds his subjects.... Mack's anecdotal descriptions give only a cardboard sense of who they are...there is little to flesh out his sweeping claim (paras. 29-30).

Gleick located Mack atop a "new wave of marketing the abduction myth" (para. 6) instead of doing science. He associated Mack's abduction research with popular culture, not "respectable" science. Gleick depicted Mack as a boundary-transgressing Harvard professor who, as a member of the "Smart" community, should "know better" (para. 5). In defense of the boundaries of conventional science, Gleick condemned the blurring of boundaries between fiction and fact. In opening and closing his story, he made the claim that the abduction phenomenon was "a leading case of the anti-rational, anti-science cults that are flourishing with dismaying vigor" (para. 5), he wrote. "The blurring of distinctions between real knowledge and phony knowledge" is "a dangerous trend" (para. 5), he wrote; "outside of hard science, too many academics have fallen into the literary conceit that anyone's version of reality is as valid as anyone else's" (para. 49).

Gleick took a stand in the memory wars by emphatically rejecting the idea of repressed and recovered memory, linking it with "UFO-obsessed therapists" (para. 27). Mack did not *know* that people have been abducted, Gleick asserted: he *believed* it. Gleick depicted Mack's suggestion that abduction might have a spiritual element as another violation of the boundaries of science, this time that sacred boundary keeping science separated from religion. Gleick made the case that science is about knowledge and religion is about belief, and he deemed belief in abduction "antiscience" and "antirational" (para. 5). He made Mack an "unrepentant" sinner who refused to confess that his work was tainted by

"contaminating influences" (para. 35). Gleick made Mack a scapegoat for all challengers of the boundaries of science, likening him to every kind of trespasser from "faith healers" to "Holocaust-deniers" (para. 5), covering a broad spread of scientific boundary violations.

Gleick wrapped up his review by challenging the idea that there might be "something clinically respectable" (para. 47) about the study of abduction. Decrying an attitude he described as "anything goes these days in the mental health business" (para. 46), he concluded his review by censuring Mack once more for his breach of authority, with this assertion: "Memories can't be trusted...we are susceptible to suggestion…. The painful irony is that of all the people...who should know these lessons and articulate them for the rest of us, none are better placed than professors of psychiatry" (para. 53-54).

In an interview with me (see Appendix B), Gleick said he wrote his review of Mack's book because "I was angry about the [media] coverage" it was receiving. "I knew this was garbage, and I was frustrated that the press was institutionally unable to say, 'It's garbage'…. Journalists ought to be responsible," he said, for knowing the difference between science and non-science. Gleick told me he was especially angered by *The New York Times Book Review's* treatment of *Abduction* (Gordon, 1994), because, he claimed, the reviewer took the book seriously. Gleick, like Mack a Harvard alumnus (he is a 1976 graduate of Harvard College), said he solicited the book-review assignment. "I had actually met Mack," at a Harvard event, "so I knew about him." Gleick said he was "interested in pseudoscience," and "I thought I could write a fun and intelligent review."

(Gleick has posted his review on a personal Web site he maintains.) "You can't convince people" that work such as abduction research is pseudoscientific by writing an article about it, he told me. "I'm not sure it's possible" to dissuade believers of pseudoscience," he said; it was his choice to use the book-review format in making his case….

A comic corrective?

Gleick used his book-review format as a foundation for constructing a frame of rejection, a victimage ritual. "Frames stressing the ingredient of *rejection* tend to lack the well-rounded quality of a *complete* here-and-now philosophy," Burke (1984) observed; they caricature their subjects and "make for fanaticism" (p. 28). Gleick's victimage ritual did, indeed, attempt to caricature Mack, as a "mark," a huckster, a gullible believer. Gleick's stabs at humor were of the mean-spirited sort (not uncommon in journalism these days, I would observe); they were not comic in the Burkean sense. Burke believed criticism was inherently comic, and he believed the comic frame more useful "for the handling of human relationships" (1984, pp. 106-107). The comic frame is "charitable, but...not gullible," he said, it is humane and accepting, depicting people "not as vicious but as mistaken" (p. 41). Ambivalence — a notion compatible with Mack's fuzzy boundaries of reality but incompatible with Gleick's conventional hard boundaries of reality — is "an essential *comic* notion" that "provides the *charitable* attitude towards people that is required for purposes of persuasion and cooperation," Burke said (p. 166).

While Gleick's victimage ritual did pack some rhetorical punch, it was confusing. Gleick labeled Mack a "Mark" — a dupe who cannot distinguish fantasy from reality —

"masquerading as a Smart" — someone who can distinguish fantasy from reality but also enjoy the fantasy as entertainment. And yet Gleick was ultimately unable to make the case that Mack was a Mark, not a Smart. Mack's authority was too durable for Gleick to dismantle. Indeed, Gleick's victimage ritual depended on the assumption that Mack *was* a legitimate scientific authority. Mack was flouting authority, Gleick claimed, and he was getting away with it because *he himself* was an authority. Gleick's positivistic frame of rejection did not accommodate non-visible, non-material, non-measurable things, so he declared abduction unreal and those who claim it possible wrong, and he depicted Mack in violation of public trust for his claims. In his view Mack had failed to live up to his credentials — but in the end he made a case for Mack's maintenance of credibility, arguing that psychiatrists were best qualified to address the "phenomenon."

In light of his own apparent embrace of the conventional scientific worldview, however, Gleick might be persuaded to agree that posing questions and formulating hypotheses are standard elements of scientific method. He might agree that the aim of science is to make known the unknown. Mack was asking questions and formulating hypotheses in an attempt to explain a phenomenon that no one understands; he proposed that abduction might be a clue to a mystery worth solving. Gleick asserted that there is no phenomenon and therefore no mystery. But in spite of Gleick's efforts to marginalize Mack's research, a mystery remained, and Mack was arguably taking a scientific approach to solving it. In the conventional scientific worldview, disagreement with a theory or a finding does not warrant dismissal; an alternative theory or finding must be offered that

ultimately can stand up to scrutiny. What Gleick attempted in his victimage ritual was to dismiss Mack's theories and findings because he did not like them.

Gleick oversimplified the abduction phenomenon by declaring it a fantasy — not real and thus not requiring explanation. He foregrounded both Mack's willingness to believe and the prevalence of sexual violations in abduction accounts to justify his frame of rejection. But Gleick's victimage ritual diverted attention from at least two points that warrant attention, from scientists, journalists, and the public. One, trivializing the abduction phenomenon and blaming Mack for encouraging public interest in it enabled Gleick to skirt around a question worth attempting to answer: why are abduction stories so prevalent in our culture, why do we pay attention to them, and what do they mean? And two, oversimplifying Mack's views and blaming him for undermining the authority of science enabled Gleick to avoid addressing where exactly the boundaries of science should lie and who should be able to participate in defining them. Gleick was defending the conventional scientific worldview, as communication researchers have found journalists typically do. But was he considering why he was doing so?

The tragic frame of rejection Gleick employed located Mack's abduction research outside the boundaries of legitimate science. Inside those boundaries, reality is material and observable, thus knowable and predictable. Mack's boundary-stretching perspective was strategically ambiguous, providing a frame of acceptance for a conception of reality both bounded and unbounded, material and immaterial, predictable and unpredictable, observable and unobservable, knowable and unknowable. Gleick explicitly challenged

Mack's expanded scientific worldview by claiming that he "should know better" (para. X). Mack said abduction warrants study. Gleick called it fantasy, mania, a craze not worth a legitimate scientist's attention. Mack claimed his motive for studying the abduction phenomenon was scientific curiosity and a desire to help troubled people. Gleick said Mack was "toying" with his clients, motivated by a desire for profit.

Mack (1995) characterized the conventional scientific worldview as a threat to scientific progress, excluding as it does "human consciousness and experience as legitimate ways of knowing about reality" (pp. x-xi). Mack (1994a) suggested broadening the frame to accommodate experience, including abduction. He could choose, he said:

> Either to stretch and twist psychology beyond reasonable limits, overlooking aspects of the phenomenon that could not be explained psychologically...i.e. to keep insisting on a psychosocial explanation consistent with the prevailing Western scientific ideology [or] open to the possibility that our consensus framework of reality is too limited and that a phenomenon such as this cannot be explained within its ontological parameters. In other words, a new scientific paradigm might be necessary in order to understand what was going on (p. 20).

But while attempting to broaden his frame, at the same time Mack described his work as real and legitimate science by conventional standards: maintaining objectivity, using sound methods, attempting to falsify claims, and submitting data to peer review. Mack asserted in *Psychological Inquiry* (McLeod, Corbisier, & Mack, 1996) that the discourse on abduction was:

> Skewed due to a lack of first-hand clinical information and to cultural biases to which we all are vulnerable.... An adequate analysis of subjective abduction experience should be corroborated across reporters, should predict the form of future reports, and should predict the general future behaviors of the persons involved (p. 160).

He explained in *Abduction* (1995): "I am reporting the experiences of the abductees as told to me and not presuming that everything they say is literally true.... [T]he objective distance between me and the experiences...should be understood" (p. ix) He depended on the standard vocabulary of science: "Efforts to establish a pattern of psychopathology.... Psychological testing...has not revealed evidence...that could account for... reported experiences.... My own sample demonstrates…" (p. 4) He took a disinterested rhetorical stance: "As personal reports are our principal source of knowledge...we must be especially rigorous in evaluating their authenticity, affective intensity, and consistency ...as well as the motivation, skepticism, believability and sincerity of the reporter...." (p. 424)

By attempting simultaneously to expand and confine his perspective, Mack disturbed the boundaries of science without necessarily extending them. Mack was not able to persuade his critics to adopt a broader perspective on reality. A comic corrective to Gleick's victimage ritual and other debunking efforts would provide an expanded perspective on reality that would be better than other, more narrow perspectives because it would explain more and exclude less; it would be more useful, not "either-or" but "both-and." Such a corrective would enable both Gleick and Mack to maintain their own cultural authority while respecting the other's authority. Such a frame ideally would accommodate all questions that might be asked. Gleick's concern was knowledge, while Mack's concern was understanding. Gleick expected his scientific authorities to employ crisply drawn cognitive maps, depicting exactly what is "there" and "real." Mack deemed such maps incomplete and called for new ones. A comic corrective to Gleick's

victimage ritual would posit that reality is not absolute but evolving, that it is what one needs to know in order to get along. Such a corrective would provide a new cognitive map that would point the way toward the kind of knowing that may answer the question "what is there?" without actually putting the knowledge of "everything" on the map.

Scientific worldviews are "perspectives"; motives derive from perspectives, and actions derive from motives (Burke, 1984, p. 92). Gleick depicted Mack's post-positivistic worldview as a threat to the positivistic worldview — represented by rationality itself —a threat to its explanatory authority, the cultural authority of the scientific establishment, the power to explain everything. But Mack did not reject the positivistic worldview — he proposed that it might be inadequate to explain all there is. In the positivistic worldview, truth cannot be relative, and relativism — the idea that true and absolute knowledge of reality is impossible because knowledge is contextual — is anathema to science. The word "absolute" — derived from the Latin *absolutus*, meaning "to set free" — has come to mean perfect, unerring, certain. (One synonym for "absolute" is "God.") "Relative" is typically opposed to "absolute" and tends to convey the idea of imperfection, error, uncertainty. However, relative can also mean relational, *related to*. Although Burke asserted that he was not a relativist, his conception of knowledge as both contextual *and* true to the nature of reality is a relative conception in this sense. The key to constructing a comic corrective to Gleick's critique is to explain how the two are linked.

Transformation and transcendence occurs, as Burke (1969a) noted, in areas of ambiguity. In attempting to transcend the apparent dichotomy of absolutism and relativism, it is

worth considering not only that "relative" can mean relevant and pertinent but also that "transcendence" derives from the Latin word meaning "to climb across." Haraway (1991) showed a way toward climbing across the absolute-relative divide in her critique of scientific absolutism and relativism as impossible stances promising "vision from everywhere and nowhere equally and fully" (p. 191). A better alternative, she proposed, "is partial, locatable, critical knowledge sustaining the possibility of webs of connections called solidarity in politics and shared conversations in epistemology" (p. 191).

A positivistic (Burke used the term "reductionist") perspective on reality reduces reality – it generalizes, simplifies, narrows, lessens, lowers, and debunks, Burke explained (1969a). Such a perspective does not accommodate the ambiguity and complexity that characterize reality. Burke favored rhetorical strategies aiming for representativeness, providing not only an accurate but also a complete (that is, complex) representation. Strategies of transcendence and transformation, Burke explained, rest on the assumption that there is no ultimate truth, just a constant process of seeking truth. And not all ways of seeking the truth are equal: some ways are better. Transcendence is a means of finding a better way, Burke said; it involves adopting a perspective — choosing a position — from which two seemingly opposing points of view "cease to be opposites" (Burke 1984, 336).

A comic corrective to debunking efforts such as Gleick's victimage ritual would transform and transcend absolute and relative conceptions of reality by acknowledging that partial, situated perspectives are neither absolute nor relative and, together, provide a more complete — thus, better — knowledge of reality. Such a corrective would depend

upon a conception of science as a practice of exploring reality from different perspectives. It would acknowledge that the stance of objectivity dictated by the conventional scientific worldview is what Haraway (1991) called a god trick — a disembodied, dislocated, and thus impossible stance.

Haraway proposed a more realistic, situated and embodied scientific perspective. She argued that partial perspective is not only a valid perspective but ultimately a better one: a multiplicity of partial perspectives might yield, collectively, the broadest possible perspective on reality, certainly broader than the non-situated, hypothetical, objective perspective. The contextualized perspective is better: in Burkean terms, it is more well rounded. Synthesizing and integrating information gathered from as many different perspectives as possible should yield a broader understanding of reality: this approach might be the best way to get as close to the truth as possible. A more well rounded perspective on reality provided by a comic corrective would recognize that subjective experience is not better than objective knowledge, or vice versa: they are different and partial perspectives that together come closer to the truth than either one does alone. They are relative in the sense that they are relational and pertinent.

A comic corrective to Gleick's victimage ritual would not require a wrenching change in perspective, then, only a broadening. As Burke acknowledged, however, most people are not willing to do what they need to do in order to get along: that is, they are not willing to be tolerant, to round out their frames of reference. Gleick was comfortable with the conventional scientific worldview because it provided him with a familiar, dependable,

highly readable cognitive map and a good defense against chaos and confusion, the enemies of good journalism.

Conclusion

Textual analysis, as Dow (1996) has noted (see Chapter 3), should be able to reveal "something interesting and useful about the text itself" and also something "about the kind of symbolic activity the text represents" (pp. 4-5). This analysis has shown something useful about the texts selected for analysis, how they contain rhetorical acts of boundary-work. And it has shown something interesting about the texts, how they also contain ritual acts of cultural maintenance. As noted in Chapter 3, the aim of qualitative research is to examine people's interpretations of experience toward comprehending the meanings they construct and use to guide their actions in everyday life (Christians & Carey, 1989), to enable insights into "the complexities of beliefs, understandings, and responses" (Wynne, 1991, p. 113). In this analysis of the Case of the Deviant Doctor I have examined journalists' interpretations of Mack's interpretations of experiencers' experiences and considered the meanings and beliefs expressed in Mack's accounts of abduction and in journalists' accounts of those accounts. In Chapter 7, I compare some other cases of controversial science with the Case of the Deviant Doctor. In Chapter 8, I further consider possibilities for journalistic (and scientific) frames of acceptance and other productive rhetorical strategies.

Notes

1. Subsequent to his Mack/*Abduction* story, Kahn wrote three stories for the *Boston Globe* about an episode of Boston public television station WGBH's science series "Nova" on abduction. The "Nova" episode featured Mack, and Mack wrote a long letter of complaint to its producer about its content. (I obtained a copy of this letter from PEER.) One of Kahn's stories about the episode ran before the segment aired, one reviewed the program, and one reported on the alteration of the program's content after Mack complained.
2. In an interview with me (see Appendix B), Mack said he found Miles's *Globe* review "strident," its accusations "irrational." What people mean by "irrational" is not fitting with "accepted notions of reality," he said. Something "mysterious...which seems to open up our boundaries" is not necessarily irrational. "For me, it's a rock-bottom assumption that if something is truthful, and opens up our notions of what exists, what is, the universe, that's a good thing, the truth is a good thing," Mack said. If something is truthful, it is "worth fighting for"; then it's a matter of deciding "how you fight."
3. Definitions and synonyms discussed in this section were obtained between August 1, 2004, and December 1, 2004 from two online databases: http://www.dictionary.com and http://www.thesaurus.com. Each of these databases includes a number of well-known sources of information on words, including the American Heritage and Webster's dictionaries and Roget's

thesaurus, in addition to specialized sources such as legal and medical dictionaries.

4. A Google search initiated to explore the origin and meaning of the term "ontological shock" revealed that the soundtrack to the popular science fiction film "The Matrix" (1999) included a track entitled "Ontological Shock"; and that a character in an episode of the TV series "The X-Files", entitled "Patient X," used the term "ontological shock" in reference to an alleged abductee's awareness of the abduction experience. The search revealed little else.
5. Information on Neimark's publications retrieved December 20, 2004, from http://www.nyu/edu/classes/neimark/.

Chapter 7

Pseudoscientists, skeptics, pseudoscientist-skeptics:

some comparisons

In The Case of the Deviant Doctor, as explained in the previous chapter, the controversy ultimately was not only about Mack's scientific claims. From the beginning, it was also about Mack himself, a scientific authority and expert who was perceived to be transgressing important boundaries. The case may never have materialized if the doctor making the claims had been someone of lesser authority and credibility — someone without the Harvard professorship, the Pulitzer Prize, the national reputation and long record of accomplishments. In fact, others *had* made similar claims before him, "but none," as *The New York Times Magazine* noted, "with the credentials of John Mack" (Rae, 1994, para. 6), that is, none with what others would perceive as real scientific authority. Comparison of The Case of the Deviant Doctor with other cases of controversial, boundary-bending science provides an opportunity to examine similarities and differences in the deployment of rhetoric and the role of journalists, toward further illuminating the process of constructing scientific authority.

As noted in Chapter 2, research has explored how controversial scientific claims can engender what Gieryn (1999) has called "credibility contests" (p. xi). Brante (1993)

distinguished between epistemological contests over "contradictory scientific beliefs and sociopolitical conflicts that constitute "scientific controversies," asserting that such epistemological conflicts "merely reflect the existence of contrary accounts of a phenomenon," while "sociopolitical conflicts over science" involve "contending knowledge claims" (p. 181). The boundary Brante drew between these two types of conflicts lies within a fuzzy gray area where contending knowledge claims may depend on particular scientific beliefs, or worldviews. The controversy over Mack's abduction research falls into this fuzzy gray area, in my view.

Controversy in the Mack case was multifaceted. As shown in Chapter 4, the legitimacy of his research subject (alien abduction), research methods (hypnosis, co-creative process), theories (validation of the idea of repressed and recovered memory), and his scientific worldview (of physical and numinous reality) were questioned. Implicitly and explicitly, his right as a Harvard authority to engage in the study of such a borderline phenomenon as abduction was criticized. Mack labeled himself a scientist and his abduction research scientific, but critics disputed those labels. Mack espoused an unconventional scientific worldview that could accommodate the abduction phenomenon, as well as his approach to exploring it, but critics defending the conventional scientific worldview placed abduction outside the boundaries of reality and scientific legitimacy.

Dearing (1995) examined newspaper reporting of three cases of controversial claims, which might be compared in some respects to the Mack case, in a content analysis of media coverage of what he called "maverick" science. The cases Dearing examined were

business consultant Iben Browning's 1990 earthquake predictions, Peter Duesberg's contrary views on the cause of AIDS, and Stanley Pons and Martin Fleischmann's cold fusion work. In each of these three cases, Dearing found news stories were telling readers "*which way to think"* about these contested claims*, "and according to a majority of relevant scientists, it was the* ***wrong way*** [emphasis in original]" (p. 355). In the Mack case, most media accounts of his abduction research reported Mack's views as well as opposing views. In this case the "right" way to think about abduction did not become clear, though one could argue, *a la* Dearing, that simply by reporting Mack's views, the stories about his abduction research gave credence to his claims. In my analysis (see Chapter 6) I found that some reporters heroicized Mack, wittingly or unwittingly, in the process of writing about his abduction research, locating him on a ritual journey to some sort of new understanding.

Hagendijk and Meeus (1993) examined what they called "the Buck-Goudsmit Affair" (p. 391), a Dutch public controversy over claims of a breakthrough in AIDS research. Comparing this case to the Pons and Fleischmann cold fusion case (see below), the two researchers observed that in both cases "the ways in which the issues at stake were understood by participants and the news media changed drastically over time" (p. 392). In this sense the Mack case differs from both the Pons-Fleischmann and the Buck-Goudsmit case, in that the ways in which the abduction phenomenon and his claims about it appear to have been understood by participants in the discourse, including journalists, did not seem to change much over time.

The Buck-Goudsmit case involved controversial science claims that that the two researchers submitted to *Science*. Their paper was peer-reviewed and published in *Science*, then retracted. This controversy prompted Buck's institution, the University of Eindhoven, to investigate labor and management practices in Buck's department (though not his scientific claims *per se*), and the results of this investigation led to Buck's resignation. Buck's university also issued a press release reporting the retraction of claims Buck made in *Science*. Goudsmit's institution, the University of Amsterdam's School of Medicine, established an investigative committee to review his research, and this committee "concluded that the measurement of [research] results was not correctly represented in the *Science* article" (p. 408). However, "the report did not change Goudsmit's public identity substantially," according to Hagendijk and Meeus, and Goudsmit remained at the medical school, while Buck continued to be linked with "misrepresentation and misconduct" (p. 408). There are similarities and differences between this case and the Mack case: Mack published his abduction claims in *Psychological Inquiry*, not the more prestigious *Science* or *Nature*, and he did not retract any claims published therein or made public anywhere else. As with Goudsmit, Mack's institution, Harvard Medical School, investigated his research, directed him to be more careful, and kept him in the fold. Unlike Goudsmit's case, Harvard Medical School did not publicly critique Mack's published claims.

Caudill (1989) addressed the role of journalists in a historical rather than a contemporary controversy, over the scientific legitimacy of Darwin's theory of natural selection. Caudill documented how Darwin's legitimacy as a scientist and the legitimacy of his

theory as good science were attacked in the press. *The New York Times*, for example, gave Darwin's work "a good hearing" upon publication of *The Origin of Species* in 1860, according to Caudill, but ultimately the *Times* "concluded that his theory was unacceptable on scientific as well as religious grounds" (p. 22). The *Times* dismissed Darwin as a "naturalist" rather than a scientist, criticized him "for not making a grand general statement" (p. 22) and faulted him for lacking scientific knowledge sufficiently specialized to legitimize his claims.

Examining other historical cases, Gieryn (1983, 1999) has documented rhetorical styles employed in the social construction of scientific authority. For example, 19th century English scientist John Tyndall did boundary-work in his advocacy campaign for science by attributing characteristics to science — practical utility, empiricism, theoretical foundation, skepticism, objective knowledge — that "demarcated it from religion or mechanics, providing a rationale for the superiority of scientists in designated intellectual and technical domains" (Gieryn, 1983, p. 784). This rhetorical strategy was employed in the Mack case as well, but with some differences. Mack, like Tyndall, attributed "selected characteristics to the institution of science" — in Mack's case, a scientific worldview that can explain the nature of reality, careful methods of recording observations and organizing data, the need to keep an open mind — "for purposes of constructing a social boundary" (p. 791), thereby framing his abduction research as inside the boundaries of science. Journalists reporting on Mack's abduction research tended to employ the same rhetorical strategy as well to distinguish science from other institutions and endeavors, including religion, cataloging what they considered to be the hallmarks of

legitimate science in questioning the legitimacy of Mack's research. But at the same time, Mack also argued for expanding the boundaries of science to accommodate a larger reality, and he did not maintain a boundary between his science and questions of religion or spirituality, and in fact he argued for some linkage between science and spirit.

Another case that Gieryn (1983, 1999) has examined is 19th century Edinburgh phrenologist George Combe's failed attempt to locate his work within the boundaries of legitimate science. Combe's description of science "as expandable into religious questions, as estimative or subjective in methodology, and as capable of being evaluated by non-specialists," Gieryn said (1983, p. 789), lost out to the definition of science advocated by anatomists, and Combe's transgression caused him to lose his credibility contest. Like Combe, Mack advocated expanding the accepted scientific worldview to accommodate spiritual matters (see Chapters 4 and 5). While Mack's critics would likely judge that he lost his credibility, too, it is important to note that Mack retained his position and his tenure, his credentials and his funding. Upon concluding his abduction project, he was able to return to the work he had been doing for decades and to continue to publish, in scientific and mainstream media. Consequently, in my judgment, Mack retained at least some cultural authority in the face of criticism.

The case of cold fusion: pathological science?

One of the most thoroughly documented cases of controversial scientific claims in the literature of science studies is the 1989 cold-fusion story (e.g. Collins & Pinch, 1993; Gieryn, 1992; Gross, 1995; Huizenga, 1992; Lewenstein, 1995; Sullivan, 1994; Taubes,

1993; Toumey, 1996). The scope of journalistic reporting on the Mack case, though extensive, pales when compared with the flood of media coverage generated by Pons and Fleischmann's 1989 cold fusion claims, and media coverage played an important role in both cases. Similarities and differences between the Case of the Deviant Doctor and "the Ballad of Pons and Fleischmann" (Gieryn, 1992, p. 217) are worth a brief look, nonetheless.

Like the Mack case, the cold fusion story involved legitimate scientists making controversial science claims, using controversial research methods, and circumventing peer review. The two cases also differed in some significant ways. Credentials are a key in cases of controversial science, and the Mack and cold fusion cases were no exceptions. Stanley Pons of the University of Utah and Martin Fleischmann of the University of Southhampton had proper academic/scientific credentials and decent reputations among peers. Taubes (1993) has described Fleischmann as "one of the most distinguished electrochemists in the world" (p. xix) and claimed "it was Fleischmann who gave cold fusion its…credibility" (p. 10). However, in the case of both Pons and Fleischmann, neither their degrees nor their affiliations were "Harvard," and they were known only within their own fields, while Mack had earned some national recognition inside and outside his field.

Methods were disputed in both cases, but in the cold fusion case the replicability of experiments was key, while in the Mack case it was not: the former involved laboratory apparatus, the latter human subjects. Pons and Fleischmann were chemists in a dispute

with physicists, who considered themselves the elite among scientists (see, for example, Kevles, 1978). After the April 1989 announcement of cold fusion claims, Pons reportedly appeared to cheers at a meeting of the American Chemical Society, while at a meeting of the American Physical Society Pons and Fleischmann were heaped with criticism for their claims (Lewenstein, 1995). Mack, a psychiatrist, drew the harshest criticisms for his abduction research from psychologists and psychiatrists, his peers but also two communities in a tug of war over authority (see Chapter 1).

Mack and Pons and Fleischmann were criticized for bypassing peer review in announcing their claims. While Pons and Fleischmann had a paper accepted for publication in a peer-reviewed scientific journal in their field before they made their public announcement of their claims (Lewenstein, 1995), Mack's first peer-reviewed scientific journal publication about his abduction research came two years after his popular book *Abduction* (Mack, 1994a) was published. Institutional politics played important but different roles in both the Mack and cold fusion cases. In the cold fusion case, the president of the University of Utah and attorneys for the university played a role in Pons and Fleischmann's premature announcement (Huizenga, 1992). In the Mack case, Harvard Medical School officials were not happy about Mack's bypassing of peer review and initiated an investigation of his work after his book came out (see Chapter 4).

Pons and Fleischmann were reported to be in competition with another research team at Brigham Young University, and some observers have said this competition played a role in their premature announcement (e.g. Huizenga, 1992; Taubes, 1993). I found no

evidence that Mack's airing of claims about abduction was prompted by any kind of competitive pressure. In the cold fusion case, potential profits from patents were also said to have contributed to premature announcement of Pons and Fleischmann's claims (Huizenga, 1992; Taubes, 1993). Toumey (1996) found in his examination of how media coverage affected public perception of cold fusion that journalists' reporting on it contributed to creating "a naïve hope about abundant cheap energy [that] displaced the science behind the hypothesis" (p. 121). Though some journalists (e.g. Gleick, 1994; Willwerth, 1994) hinted at a profit motive behind Mack's abduction work, profit did not appear to be a major factor in the Mack case, and neither Mack nor anyone else involved in the discourse about it was promising any public economic benefit from his work. Pons and Fleischmann's claims were addressed in congressional hearings and examined by the U.S. Department of Energy, while I have found no evidence that Mack's claims attracted the attention of the government.

Journalists played important but different roles in these cases. In the cold fusion case, premature reporting of Pons and Fleischmann's claims in the media made a pre-publication announcement by the university seem virtually necessary, and once the announcement was made "the role of the mass media in [the] scientific controversy quickly became a central issue" (Lewenstein, 1995, p. 403). Albeit in different ways and for different reasons, the media played a major role in the Mack case as well. As noted above, my judgment is that the Mack case may never have materialized if the expert making the claims had been someone without Mack's Harvard pedigree. In the Mack case, media attention to *Abduction* (Mack, 1994a) may have prompted Harvard Medical

School's investigation of his research; and journalists' criticisms (i.e. Gleick, 1994; Miles, 1994) did, indeed, prompt Mack to rewrite parts of his book in rebuttal. Pons and Fleischmann's cold fusion claims made the covers of both *Time* and *Newsweek*, "which by their writing style foster a sense of authoritativeness" (Lewenstein, 1995, p. 418). But Mack's abduction claims did not make the covers of these authoritative news magazines, and when the magazines did report on his claims they did not frame them seriously or favorably (see Plagens & Bryant, 1994; Willwerth, 1994).

Gross (1995) examined the cold fusion case as "an extended rhetorical transaction, a tale of consensus threatened and renewed" (p. 48). Consensus, according to Gross, was " the crucial variable" in the cold fusion story, constituting "the set of facts, theories, and methods that are a discipline's intellectual capital" (p. 48). In social reality consensus is "commonly…a result of…pressures to conform backed by the threat of social and political sanctions" (p. 49). Gross argued that Pons and Fleischmann were "well-treated in the peer-review process" and that "their decision to hold a press conference in lieu of a peer review was not genuinely the object of criticism" (p. 53). What critics objected to given the key roles of peer review and experimental validation in the cold fusion case, Gross claimed, was "Pons and Fleischmann's inappropriate and continuing reticence concerning the technical details of their work" (p. 53). In the Mack case, while Mack gave indications that he would have liked his peers to come around to his way of thinking about abduction, he did not give any indications that he could or would not proceed with his research without that consensus. One of the results of Harvard Medical School's investigation of Mack's methods, however, was a directive to submit his research to

broader peer scrutiny. In the case of cold fusion, all parties involved in the controversy appeared to be applying the same scientific worldview in evaluating Pons and Fleischmann's claims (including the claimants). In the case of Mack's abduction research, one of the key elements of controversy was Mack's advocacy of an unconventional worldview, while critics defended the conventional one.

"The history of cold fusion," Gieryn (1992) concluded, "puts it outside good science, inside pathological science" (p. 236).[1] Many scientists might dismiss Mack's abduction research as pathological science –which has been defined as "the science of things that aren't so" (Huizenga, 1992, p. 203, quoting Langmuir, *Physics Today*, October 1989) – or not even science at all. In reviewing the case of cold fusion, Huizenga (1992) asked, "How is it possible for different people to examine the same…claims and reach opposite conclusions?" (p. 212). One could ask the same question about Mack's abduction research. In his case, he stood by his controversial claims, and to those who advocated more mundane explanations he suggested that they broaden their worldviews. In previous chapters I have shown how Mack framed himself as a scientist and his abduction research as science and how journalists framed it accordingly, evaluating Mack's claims on the basis of such conventional standards as peer-reviewed publication (or the lack thereof), approved research methods, and physical evidence.

In the cold fusion case, professional science societies as well as scores of physicists and other scientists played a role in evaluating cold fusion claims. In the Mack case, however, as described in Chapter 4, the role of official science in the discourse about his abduction

claims was limited to the dedicated issue of *Psychological Inquiry*, Sanford Gibbons' review of *Abduction* in the *Journal of the American Psychoanalytic Association*, Harvard Medical School's investigation, and an external advisory group of scientists Mack assembled at the behest of the medical school. I found no evidence that either the American Psychiatric Association, American Psychoanalytic Association (beyond Gibbons' review), American Psychological Association, or American Medical Association played a significant role in the Case of the Deviant Doctor.

Gieryn (1992) observed that Pons and Fleischmann's cold fusion claims became more than science — they became a story, "a narrative that got everybody *else* interested and converted many to a belief in its reality" (p. 218). In my examination of texts about Mack's abduction claims I discerned the development of a narrative, in which journalists reporting about the Mack case appeared to get other journalists interested in reporting about it as well. Though audience research is beyond the scope of this analysis, I suspect that the narrative of the Case of the Deviant Doctor did not convert many skeptics into believers, or vice versa. In the Mack case, both skeptics and believers provided evidence that once people become attached to a belief system — whether the conventional scientific worldview or an expanded worldview of numinous reality — they find it difficult to let go.

Pseudoscience and paranormal science

As the case of cold fusion has shown, a conflict over scientific knowledge claims can become an endless round of boundary-work, in which advocates and opponents of

disputed claims invoke the same cultural norms and employ the same rhetorical strategies to establish and maintain their legitimacy. Previous chapters have addressed how intellectual elites can construct and maintain a dominant scientific worldview and shape public opinion about science. Ross (1991) has explored how "sublegitimate, alternative, marginal, or oppositional" scientific cultures simultaneously "embody and contest" dominant scientific claims by employing "different versions of and various challenges to these elite languages in popular and alternative cultures…. Scientific countercultures share many of the methodological norms and claims about absolute truths in nature observed by establishment science" (p. 9), and members of these outlaw cultures make alternative knowledge claims "through appeals to the rationalist language and experimental procedures of the dominant [scientific] paradigm" (p. 20), Ross has observed. "Assuming the mantle of a rationalist style is an indispensable discourse," according to Ross, "for those whose business it is to contest orthodox claims about the natural world" (p. 17). In his examination of the "New Age" science of biofeedback and other "brain-machine technologies" (p. 32), for example, Ross found that "the yuppie ideology of personal control is reinforced by biofeedback's promise of individual dominion over bodily functions" (p. 32), couched in conventional scientific terms.

For years, the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP)[2] is dedicated to combating the sorts of outlaws Ross has written about, primarily by employing the rhetorical strategy of debunking[3] — an attitude that, as Burke (1984) observed, is not an especially effective approach to identification and persuasion. CSICOP is an organization of self-described skeptics devotted to defending what they

perceive to be the boundaries of conventional science. According to CSICOP, rational thinking and proper scientific skepticism get short shrift in public discourse about science, especially in media coverage. Religion and alien abduction, subjects that CSICOP deems outside the boundaries of legitimate science, are the target of a considerable amount of the organization's attention. CSICOP is adamant that a hard boundary must be maintained between science and religion. CSICOP Chairman Paul Kurtz, an emeritus professor of philosophy at the State University of New York-Buffalo, is also founder of the Council for Secular Humanism, which maintains a Committee for the Scientific Study of Religion and frames science in opposition to religion.

CSICOP claims a pseudoscientific, anti-rational perspective is dominant in public discourse: the organization calls its own conventional scientific worldview "alternative" and complains that proponents of its view do not have equal access to the media. CSICOP members fashion themselves as "media watchdogs willing to exert grassroots pressure on media conglomerates in response to paranormal and pseudoscientific programming" (n.p.). In 1996, CSICOP established a Council on Media Integrity as "an educational outreach and advocacy program," involving "a network of distinguished international scientists, academics, and members of the media concerned with the balanced portrayal of science in the media" and aiming "to actively promote the importance of scientific literacy and the appreciation of the scientific method and critical thinking" (n.p.). The Council created a "Candle in the Dark" award program to recognize accurate science reporting and a "Snuffed Candle" award program to criticize inaccurate

reporting. CSICOP claims around 70 newspapers have adopted a policy recommended by the Council to print disclaimers with stories about pseudoscientific topics and claims.

In writing about what he has called "the anti-science problem," CSICOP Chairman Kurtz (1998) has said, "If the alternative to objectivity is subjectivity, and if there are no warranted claims to truth, then the views of the postmodernists cannot be said to be true, either" (p. 67). Kurtz has credited the origins of contemporary "attacks on science" to fear of nuclear holocaust, "some excesses of the environmental movement…widespread attacks on orthodox medicine," interest in "Asian mysticism" and "revival of fundamentalist religion," not to mention "multicultural and feminist critiques of science education" (p. 68-70). "A kind of paranormal spiritual point of view totally dominates the media," according to Kurtz, "a pro-UFO point of view...propaganda for a pro-paranormal universe" (n.p.).[4]

As advocates of paranormal science tend to do, CSICOP representatives tend to locate themselves rhetorically in the underdog position, as people with an "alternative" perspective, as noted above. One CSICOP fellow has characterized his fellow skeptics as "small islands of rational thought in the vast ocean of scientific illiteracy" (Schneour, 1998), positioned "across the chasm that separates the skeptic from the convinced" (p. 41). Nonetheless, if, as CSICOP has argued, non-scientific thinkers "stand in firm defense of their convictions" (Schneour, 1998, p. 41), then it can also be argued that CSICOP stands just as firmly in defense of the conventional scientific worldview as the only legitimate way of interpreting reality. Ross (1991) has called CSICOP "a

ghostbusting organization" that is "as much a symptom of the crisis in scientific rationality and materialism as it is a grudging acknowledgement of New Age's resurgent interest in the...non-rationalist traditions of Euro-American cultures" (p. 18). John Mack himself (1992b) once described CSICOP as "an established, highly biased group of self-appointed watchdogs of science...that has assigned itself the task of investigating reported experiences of the 'paranormal' (whatever 'normal' may mean)" (p. 5).

Media coverage of paranormal science claims is one of CSICOP's reasons for being. It has been argued that the clash between normal and paranormal science makes news in itself, regardless of specific claims (Meyer, 1986). The discourse on paranormal science encompasses two contrasting scientific worldviews, according to Collins and Pinch (1982): the conventional "belief in the unity of science (implicit) and the incompatibility of psi phenomena with science" and the unconventional "belief in the existence of psi phenomena and the incompatibility of psi phenomena with some part of science [leading] to the conclusion that science must be changed" (p. 48). (As reported in Chapter 4, Mack advocated a variation of the latter view, claiming the conventional scientific worldview was not broad enough to explain abduction.) "Believers" take boundary-challenging claims as true until proven false and worth checking out, while "skeptics" assume they are false until proven true and not worth testing (p. 45). Though "scientific phenomena are not reproducible with great reliability…this is usually explained as being a consequence of scientists' mistakes, or 'anomalies' [or] 'gremlins'...confidence in the correct way to describe and manipulate nature survives this manifest intractability" (p. 159). The replicability and falsifiability of experimental results — whether normal or

paranormal — depend not on definitive test results, according to Collins and Pinch (1993), but on consensus about what constitutes sufficient testing.

Paranormal scientists are generally excluded from what Collins and Pinch (1982) have called the constitutive, or professional, forums where science claims are typically legitimated. Tactics employed by paranormal scientists in contingent (popular) forums to legitimate their claims include what Collins and Pinch have called metamorphosis, or acquiring the trappings of legitimacy — Ph.D.s, academic posts, research funding, professional associations, and peer-reviewed journals as well as adoption of accepted scientific methods such as careful observations with meticulous recording and analysis of data.[5] Tactics of rejection employed by legitimate scientists, in constitutive and contingent forums, to dismiss paranormal claims include ad-hominem attacks, magnification of anecdotal evidence, the blocking of journal publication, "blank refusal to believe," "association with unscientific beliefs," and "accusations of triviality" (p. 257). McClenon (1984) examined how parapsychologists employ the ideology of scientism — "the body of ideas used by scientists to legitimate their practices" (p. 2) — to legitimate their work. Scientism "is necessary in maintaining the boundaries of the scientific community.... One aspect of maintaining boundaries is deciding whether any specific anomaly should be allowed into the scientific process" (p. 3). McClenon emphasized "the importance of...deviance labeling in defining the modes of rhetorical conflict" (p. 82) to be employed in tending the boundaries of science. "Development of rhetorical strategies using the media which demonstrate the frequency and unexceptional

nature of psi" — that is, their non-deviance — "could weaken the philosophical arguments of critics" (p. 103).

The Parapsychological Association (PA)[6], established in Durham, NC, in 1957, represents an attempt to "normalize" paranormal research and provides a good example of the tactic of legitimation that Collins and Pinch (1982) have called metamorphosis. It is interesting to note that this group has succeeded in deploying the tactic in both contingent and constitutive forums. One of the PA's primary aims has been to "advance parapsychology as a science" (n.p.). Psychology professor J.B. Rhine (deceased), director of a parapsychology laboratory at Duke University in the 1950s[7], proposed the formation of the PA as a professional society. The PA maintains professional and educational requirements for membership, holds annual conventions, runs an awards program, and publishes the *Journal of Parapsychology.* In 1969 the PA became an affiliate of the American Association for the Advancement of Science, a bastion of scientific authority and legitimacy since the 19th century, and it has sustained this affiliation into the present. The PA says it now has 211 full and associate members.

Along with the PA, some additional examples of deployment of the tactic of metamorphosis (Collins & Pinch, 1982) to construct legitimacy for fringe science are the the Society for Scientific Exploration[8] and the National Institute for Discovery Science (NIDS).[9] The Society for Scientific Exploration (SSE) was created by a group of self-described scientists and scholars interested in promoting "the study of all questions that are amenable to scientific investigation without restriction" (n.p.). The SSE's founding

president was Stanford University physicist Peter Sturrock. The society claims 800 members, holds annual meetings, and publishes its own peer-reviewed *Journal of Scientific Exploration*. The SSE characterizes itself as:

> A professional forum for presentations, criticism, and debate concerning topics which are for various reasons ignored or studied inadequately within mainstream science. A secondary goal is to promote improved understanding of those factors that unnecessarily limit the scope of scientific inquiry, such as sociological constraints, restrictive world views, hidden theoretical assumptions, and the temptation to convert prevailing theory into prevailing dogma. Topics under investigation cover a wide spectrum. At one end are apparent anomalies in well established disciplines. At the other, we find paradoxical phenomena that belong to no established discipline and therefore may offer the greatest potential for scientific advance and the expansion of human knowledge (n.p.).

In its mission statement NIDS describes itself as:

> A privately funded science institute engaged in research of aerial phenomena, animal mutilations, and other related anomalous phenomena…. NIDS maintains a large database of anomalous activity and investigates reports whenever possible, using a combination of high quality ex-law enforcement investigative teams and contract research involving nationally accredited laboratories in the veterinary, biological (including bacteriological, virological and DNA), chemical, and materials sciences. The results of these investigations are published in peer reviewed journals and on the NIDS website (n.p.).

The Velikovsky case

The case of Immanuel Velikovsky and his claims about the natural history of Earth (Bauer, 1984; Carroll, n.d.; de Grazia, 1966; Friedlander, 1995) is examined here for a number of reasons. Velikovsky, like Mack, was a psychiatrist and a Freudian analyst. He received his medical degree in Moscow in 1921 and studied psychoanalysis in Vienna with a student of Freud. In 1940, he began exploring ancient historical records for evidence of natural catastrophes that might explain certain occurrences such as the end of Egypt's Middle Kingdom. In the 1950s, he published the results of his research, in

Worlds in Collision (1950) and *Earth in Upheaval* (1955) – like Mack, choosing to make his claims in popular books rather than in professional journals. A key element of Velikovsky's controversial claims, as with Mack's, was the concept of repressed and recovered memory. Velikovsky mixed psychoanalytic theory with ancient history to develop his thesis that global cataclysmic events of the biblical era were not recorded as such in history due to what he called collective amnesia; his goal, he asserted, was to reconstruct a forgotten mass trauma (Bauer, 1984). In *Worlds in Collision* Velikovsky put forth a claim of an ancient, catastrophic cometary impact with Earth and said cosmic collisions were "implicit in the dynamics of the universe" (Velikovsky, 1950, as cited in Bauer, 1984, p. 19). Velikovsky's claims, like Mack's, generated media coverage and scientific uproar.

Collier's, *Harpers*, and *Newsweek* magazines ran favorable early reviews of *Worlds in Collision*; most pre-publication coverage reportedly was positive (Bauer, 1984). Once the book came out, scientists threatened to boycott its publisher, which quickly dropped the title (though another publisher picked it up). Opponents fought Velikovsky's claims "polemically" (Bauer, 1984, p. 78). Critics complained that Velikovsky lacked "acceptable credentials" (Friedlander, 1995, p. 21) and that his theories rested on flawed conceptions of physics and astronomy. *The New York Times Book Review* called *Worlds in Collision* "a soggily written, heavily annotated, 'scientific' explanation of Old Testament miracles" (Dempsey, 1950). Many scientists who commented on his books belittled Velikovsky's scholarship, though what was said to distinguish these books from other pseudoscientific works was an appearance of scholarship, created by copious

footnotes and citations (Friedlander, 1995). "Velikovsky's "most intense…opposition" (Bauer, 1984, p. 64) apparently came from scientists at Harvard. His scientist-critics claimed that Velikovsky exhibited what they perceived to be "a deeply rooted hostility to science that draws its strength from both ignorance and misunderstanding" and that promotion of his books "traded on the public's general inability to judge critically" (Friedlander, 1995, p. 16).

Nonetheless, like Mack's *Abduction* (1994a), Velikovsky's books were best sellers. Velikovsky's advocates described his work as "a formidable assault on certain established theories of astronomy, geology and historical biology," a challenge to "the general orthodoxy of an ordered universe" (de Grazia et al, 1966, p. 1). Others said Velikovsky's supporters were "people not only without formal and relevant credentials, but more importantly…without an adequate understanding of the subject matter" (Friedlander, 1995, p. 13). As some journalists did with Mack, supporters depicted Velikovsky as a heroic figure, challenging authority. "The issues are clear," said Velikovsky's advocates: "Who determines scientific truth? Who are the high priests, and what is their warrant?" (p. 2). Advocates claimed opposition from "the scientific mafia" (Pensee, 1976, p. 5) and "censorship of Velikovsky's interdisciplinary thesis" (p. 13). A quarter of a century later, *The New York Times* was still reporting on Velikovsky, depicting him as a "writer" colliding with scientists, locking horns with the scientific community (Sullivan, 1974).

Some critics have blamed "the New York literati" for championing Velikovsky's ideas: "in love as they were with all things Freudian" (Sullivan, 1974, p. 9), they embraced Velikovsky's theory of mass repression of the memory of a global traumatic event. Velikovsky's writings have been said to contain little "scientific discussion…. What one finds instead are exercises in comparative mythology, philology, and theology…an impressive demonstration of ingenuity and erudition…but it isn't science. It isn't even history" (Carroll, n.d., n.p.). A piece in *The New York Times Book Review* entitled "Velikovsky lives again" (Thomsen, 1977) noted:

> It is often difficult to explain to non-scientists why the name of Immanuel Velikovsky or any of his followers makes scientists go purple in the face. The books seem intelligent and scholarly. They are full of undoubtedly real names, dates and facts. Book-length treatises have been written in refutation (p. BR3).

Upon his death, *The New York Times* called Velikovsky "a star-crossed theoretician of the cosmos" (Jastrow, 1979, p. E22). Bauer (1984) has concluded that "Velikovsky's ideas about physics, chemistry and astronomy [were] in large measure invalid and uninformed" but also has found that much of the criticism levied at him contained "errors, logical non sequiturs, wrong and misleading statements" (p. 151). In his judgment Velikovsky was "a pseudo-scientist, but…not necessarily wrong" (p. 152). According to the Astronomical Society of the Pacific (2003), Velikovsky's writings were "once very popular…now only a small underground of true believers keeps his work alive" (n.p.). Since Velikovsky first published his theories, other global catastrophe theories have been published— for instance, the theory that a massive comet or asteroid impact with Earth caused extinction of the dinosaurs (see Alvarez, 1997; Raup, 1986). But science has not validated the theory of Worlds in Collision.

UFOlogy

If Bauer (1984) were to examine the claims of UFOlogists and skeptical scientists' and journalists' attempts to debunk them, perhaps he might conclude that UFOlogy was a pseudoscience, but not necessarily wrong…. Efforts to construct UFOlogy as a legitimate scientific endeavor are examined here in particular because some UFOlogists have claimed a link between alien abduction and their own study of unidentified flying objects (e.g. Appelle, 1996).

Blake (1979) called UFOlogy "a science in development," characterizing it as "an intellectual product of social groups not of the intellectual elite" (p. 333). That the study of unidentified flying objects (UFOs) has come to be known as an "-ology" is but one small aspect of that development. As Collins and Pinch (1982, 1979) reported, acquiring the trappings of scientific legitimacy is a standard tactic of legitimation employed by paranormal scientists. And as Bourdieu (1991) observed, names and labels are important, serving as a means of creating social reality and the power and authority that operate in that reality. UFOlogy has created for itself the labels and other trappings of legitimate science, and media coverage plays a role in this construction of legitimacy. The contributions of journalists to construction of the concept of UFOs (and, concomitantly, UFOlogy) are worth examining, Blake (1979) said. While, as he noted, many journalists, official sources, and members of the scientific community have ridiculed reports of UFOs and deemed the subject "unsuitable for serious scientific study" (p. 330), nonetheless

official attention and mass media coverage have made and kept UFOs and UFOlogy salient over the years (see Smith, 1983).

One strategy that UFOlogists have employed to establish credibility for UFOs as a legitimate research subject and themselves as legitimate researchers, Blake said, is to rhetorically construct UFOs as phenomena in the natural world, thus locating them inside the boundaries of legitimate science. Another strategy has been to locate the UFO phenomenon outside the boundaries of conventional science, where the authority of conventional science does not apply. (As documented in previous chapters, Mack did a little of both, labeling abduction a real phenomenon and also claiming reality was something more than the conventional scientific worldview described.) Similarly, UFOlogist J. Allen Hynek (see below) sorted scientists working on "the UFO problem" into two groups: those who treat it "with ridicule and contempt, refusing even to examine it, denouncing the subject out of hand"; and those who "maintain — or might come to believe after examination — that there is a strong possibility that UFOs are purely psychological phenomena, that is, generated by individual or group mental activity" (Hynek, 1972, as cited in Smith, 1983, p. 37). In addition, UFOlogists reportedly are divided among those who locate the abduction phenomenon on their "turf" and those who argue that validating abduction accounts detracts from the scientific credibility of UFOlogy (Rosen, 1999). But even some of those UFOlogists who reject abduction claims reportedly may "go to great lengths…to establish that they believe in extraterrestrials and that that aliens have visited Earth" (n.p.).

UFOlogists have adopted the standard scientific methods of observing, data collection, record keeping and reporting. As Blake (1979) reported, UFOlogy "has developed as a distinct body of data studies by distinctly 'credentialed' investigators, some of them affiliated with organizations devoted to the study of UFOs" (p. 315). UFOlogists also have a substantial archive of official records to tap for validation (see Smith, 1983). The U.S. Air Force studied UFOs from 1948 to 1969, receiving over 12,000 reports of sightings and commissioning several projects such as Sign, Grudge, Blue Book, and the so-called Condon report. Records of congressional hearings on UFOs are available along with reports on the American Association for the Advancement of Science's 1969 UFO symposium in Boston (Smith, 1983). The "grassroots" Mutual UFO Network (MUFON), established in 1969, publishes its own journal, holds symposia and produces proceedings. The American Institute of Aeronautics and Astronautics, an association of aerospace professionals, published an appraisal of the UFO "problem" in 1970. In 1976, the Congressional Research Service of the Library of Congress produced a comprehensive report on the history and status of UFO sightings and studies, updating it in 1983.

Astronomer J. Allen Hynek (who died in 1986) played a role in producing some of the official record on UFOs described above (Smith, 1983). Hynek was one of the first properly credentialed scientists to establish and maintain credibility and authority as a UFO researcher and a legitimate scientist as well. Hynek reportedly began exploring the UFO phenomenon as a skeptic but later came to believe that UFO reports pointed to a mystery that needed to be solved, though he often asserted that he was not a "believer" in UFOs (Smith, 1983). With a Ph.D. in a legitimate science and a professorship at the well

known Northwestern University, he served as a consultant to the U.S. Air Force for its UFO studies in the 1960s. Hynek also testified to Congress on the subject. In 1972 Hynek published *The UFO Experience: a Scientific Inquiry* (Chicago: Henry Regnery), and in 1973 he founded the Center for UFO Studies (CUFOS) at Northwestern. CUFOS established its own journals (which continue to publish today), the *Journal of UFO Studies* (JUFOS) and the *International UFO Reporter*.

One of Hynek's collaborators, Jacques Vallee, also was able to develop credibility and authority both as an UFOlogist and a legitimate scientist. Vallee, who has a Ph.D. in computer science from Northwestern, appears to have constructed separate public identities for himself, as a UFOlogist and a venture capitalist specializing in Silicon Valley business development. A biography posted at his personal Web site[10] identifies him as a general partner of SBV Venture Partners, a Silicon Valley investment group, and says about his interest and expertise in UFOlogy only that he "has had a long-term private interest in astronomy, in writing and in the frontiers of research, notably unidentified aerial phenomena [UAP]." His corporate biography[11] cites his degrees in mathematics, astrophysics, and computer science and his work with the Shell and RCA corporations, Stanford University and the U.S. government but does not make any reference to his interest in UFOs (or UAP).

One must consult a source other than Vallee's biographies for a complete list of his publications (I consulted the Library of Congress catalog) — his UFOlogy books include *Anatomy of a Phenomenon: Unidentified Objects in Space — A Scientific Appraisal*

(1965), *Challenge to Science: The UFO Enigma* (1966), *Edge of Reality: A Progress Report on UFOs* (1975, with J. Allen Hynek), *Confrontations: A Scientist's Search for Alien Contact* (1990), and *Forbidden Science: Journals 1957-1969* (1992). His "real science" books include *Network Revolution: Confessions of a Computer Scientist* (1982) and *Heart of the Internet: An Insider's View of the Origin and Promise of the On-Line Revolution* (2003).

One recent study of the potential scientific value of studying UFOs likely drew media coverage because it was convened by Stanford University physics professor Peter Sturrock — a fully credentialed and legitimate scientist attached to an elite institution, a familiar name in UFOlogy, and a founder of the Society for Scientific Exploration (see above). The Sturrock-led study was financed by philanthropist Laurance Rockefeller (one of the backers of Mack's abduction research) and conducted by a panel of authoritatively credentialed "senior physical scientists," as the authoritative *Science* magazine described them (Kestenbaum, 1998, p. 21). The study reportedly concluded that some UFO sightings warrant scientific study.

Panel co-chair Thomas Holzer, a geophysicist at the National Center for Atmospheric Research, was quoted in *Science*, "Anything not explained is something science at some level ought to be interested in" (p. 21). University of Maryland physicist Robert Park, spokesman for the American Institute of Physics, was quoted in *Science* deeming the study of UFOs "a total waste of time.... Calling in all the people who have seen strange things just gets you a roomful of strange people" (p. 21). Even *The New York Times*

made note of this group's report, in its Science Times section (Wade, 1998).

A recent initiative undertaken by cable television's Sci Fi Channel is worth considering here because it was framed as an effort to construct scientific authority for UFOlogy but took the form of a media campaign and served the purpose of promoting TV programming. Sci Fi initiated a series of activities that Sci Fi officials said were intended to convince government officials to take UFOs seriously. These activities were also part of a publicity campaign for "Taken," a Sci Fi mini-series on abduction.[12] They included a series of online "chats" with UFO experts (including an interview with John Mack — see Chapter 5); the commissioning of a Roper public opinion poll on UFOs; a symposium in Washington, DC, on "interstellar travel and unidentified aerial phenomena"; a symposium in New York on "the reality of the abduction phenomenon" featuring Mack, Budd Hopkins, and David Jacobs; and a National Press Club briefing in Washington on the formation of a Coalition for Freedom of Information (CFI).[13] The CFI was a Sci Fi-sponsored project of the Washington public relations and lobbying firm PodestaMattoon, which orchestrated the network's UFO campaign.[14] One journalist described Sci Fi's campaign as "seeking the truth through savvy marketing" (David, 2002).[15]

Sci Fi's Washington symposium took place on the campus of George Washington University. I attended this event to observe the rhetoric of UFOlogy in action, and the following account of it is based on my observations (all quotes are taken from my notes). The university's vice president for academic affairs said his institution and the Sci Fi Channel had a common interest in promoting interdisciplinary scientific research and

"dispassionate discussions" about controversial subjects. A well known journalist with the Public Broadcasting System, Ray Suarez, moderated the event — "to keep things honest," he told me. The panel of seven experts assembled for this UFOlogy symposium included five Ph.Ds, among them physicists Michio Kaku (a science popularizer as well as a college professor), Peter Sturrock (of Stanford), and UFOlogist/venture capitalist Jacques Vallee. Given the importance of labeling in constructing authority, I should note that while I am referring to this event as a UFOlogy symposium, the Sci Fi Channel did not use this term in publicizing the event, and speakers at the event avoided use of the term "UFO," employing the alternative term "unidentified aerial phenomenon" (UAP). Credentials, expertise and authority were emphasized in speaker introductions, biographies and presentations.

Physicist/astrophysicist Bernard Haisch, director of the California Institute for Physics and Astrophysics and keeper of the Web site www.ufoskeptic.org,[16] said at the symposium that "the field is full of nonsense and hoaxes" but noted that legitimate scientific research "started out this way." Haisch said research journals and research societies are helping to establish "respectability" for UAP studies (see below regarding one of Haisch's journal contributions.) In his remarks at the symposium Jacques Vallee said that, while "this has not been done so far…reports of the phenomenon can be studied objectively with the methods of today's science without pre-judging their nature. New, radical hypotheses may be needed to account for the phenomenon." Some panelists recommended that the National Aeronautics and Space Administration or National Science Foundation should devote some funding to the study of UAPs. Speakers

discussed at length the need to (and the how-to) persuade the mass media to take their stories seriously. One speaker said the media should "take a leadership role" in telling the story of UAPs.

The *Washington Post* reported on the event (Gugliotta, 2002), leading with an account of an alleged spaceship crash. If extraterrestrial beings are visiting Earth, the *Post* observed, "somewhere some sentient beings must have figured out a way to transit interstellar space. Discussions about unidentified flying objects march hand in hand with the feasibility of interstellar space travel," and "serious people took up these two topics" (p. A12) at the symposium. A report on the symposium posted to a UFOlogy email list (Hall, 2002) claimed "someone fell down on the job" (n.p.) of promoting the event to journalists, as "only a handful of news media showed up (including Channel 4 TV and the Washington Post)."

The Associated Press (Associated Press, 2003) later reported on a Sci Fi Channel-backed lawsuit to make NASA divulge records of "a UFO that reportedly crash landed [near Kecksburg, PA] and was recovered by government workers" (para. 1) in 1965. "The cable network announced in June," the story reported, "that it was backing the effort to research the Kecksburg incident in promoting a documentary, 'Out of the Blue,' which examined various UFO reports" (para. 11). This story noted, "Sci Fi channel officials said they're looking for an explanation of what occurred. They're also looking for viewers. A November 2002 documentary on the suspected 1947 UFO crash in Roswell…was the

highest-rated special in the network's 11-year history…seen by nearly 2.4 million people" (para. 13-14).

Physicist Haisch coauthored a paper published in 2005 in the *Journal of the British Interplanetary Society* (Deardorff, Haisch, Maccabee & Puthoff, 2005) in which the claim was made that advances in scientific knowledge in recent years provide a scientific justification for taking UFO claims seriously. "It has recently been argued," the authors wrote:

> Anthropic reasoning applied to inflation theory reinforces the prediction that we should find ourselves part of a large, galaxy-sized civilization…. Furthermore, superstring and M-brane theory allow for the possibility of parallel universes, some of which in principle could be habitable. In addition, discussion of such exotic transport concepts as 'traversable wormholes' now appears in the rigorous physics literature (p. 43).

Consequently, the authors asserted, the proposition that humans may be the only intelligent life in the universe is "inconsistent with new developments in our best current physics and astrophysics theories" (p. 43). Thus scientists should consider seriously investigating UFO reports, they said. Space.com (David, 2005) reported that, according to Haisch, many scientists have "been turned off" by UFO claims that have turned out to be the products of "misinterpretations, delusions, and hoaxes" (para. 16), and consequently they dismiss UFOs as a legitimate subject of study.

A so-called "X-Conference" held in the Maryland suburbs of Washington, DC, in 2004 was, its organizers asserted, designed to attract the attention of journalists and public policy makers to the subject of UFO visitations, "extraterrestrial engagement and societal

denial," according to a press release about the conference.[17] As I did with the Sci Fi Channel's Washington symposium, I attended this conference to observe the rhetoric of UFOlogy in action. *Phenomena* magazine (Dolan, 2004) judged that the X-Conference failed to meet its aim of generating media coverage and government action — neither the *Washington Post* nor *The New York Times* covered the event. While the conference was not covered as national news, it was covered, however, as a local event by a local newspaper.

The *Gaithersburg (MD) Gazette* (Stanley, 2004) led its story on the conference with the observation, "The certainty of alien life on Earth is usually not at the top of the list of socially acceptable topics of conversation. Yet those wishing to delve into such a realm" were able to do so, the paper said, at the conference. The story reported comments from a number of speakers and attendees. For balance, it cited James Randi (who did not attend the conference), identified in the story as a magician and "investigator of paranormal claims" (para. 40). The story concluded by reporting that, according to Randi, "people who speak at UFO conferences either believe themselves, are trying to scam people…or a bit of both" (para. 48). The *Gazette* story was framed as a conventional who-what-when-where-why news report. But it prompted one attendee, UFO proponent and would-be journalism critic to complain that "the 'writer' has an expansive ignorance, an obvious bias, and a non-constructive attitude" and should "be remembered as a bad example of [her] tortured and ever more discredited craft" (Lehmberg, 2004).

SETI

While many proponents of UFOlogy relate the search for extraterrestrial intelligence (SETI) to the study of UFOs and alien abduction, SETI scientists demarcate their legitimized scientific endeavor from the out-of-bounds study of UFO sightings and alien contacts. [18] "The bane of SETI researchers is the cult of U.F.O. conspiracy theorists," *The New York Times* has noted (Nieves, 1999, p. A14). Nonetheless, reporters historically have made the link, which is arguably logical, between SETI and alien beings, and they continue to do so, though in recent years they have been making note of SETI's growing credibility as well. The narrative of SETI as a legitimate scientific endeavor began in 1959 with the publication of a paper in *Nature,* by Giuseppe Cocconi and Philip Morrison, then professors at Cornell University, proposing that technology and scientific knowledge had advanced to the point of enabling a search for interstellar radio signals of extraterrestrial intelligent origin (Cocconi & Morrison, 1959). The scientific endeavor known as SETI is now generally accepted as a legitimate subject of research, acknowledged in decadal surveys of astronomy and astrophysics published by the National Academy of Sciences (Dick & Strick, 2004), recognized by the Committee on Space Research and the International Astronomical Union, and conducted by scientists holding chairs endowed for the endeavor.

Scientists tend to be of two opinions when it comes to SETI: some think it is worthwhile, whether they themselves are interested or not; and others think it is not worthwhile, for any number of reasons deemed scientific or otherwise. These two camps make it easy for

journalists to write "balanced" stories about SETI. Media coverage of SETI has been plentiful since scientists first began to talk about it, and SETI scientists pay close attention to what journalists say about their work. Some journalists have given SETI book-length treatment, including a science editor of *The New York Times* (Sullivan, 1964) and a science writer for *Time* (Lemonick, 1998). Despite its relatively remote location, the October 1992 startup of NASA's SETI project at the Arecibo Observatory in Puerto Rico attracted a considerable number of reporters, from *The New York Times* (Wilford, 1992) to local media outlets, and generated worldwide media coverage.

Names and labels have always been important in the SETI community. Cocconi and Morrison (1959) referred to "interstellar" rather than "extraterrestrial" communications in the title of their famous paper. SETI scientists have been known to scrupulously avoid the use of certain terms such as "alien." SETI critics have tended to pick at the "E.T." in SETI (Billings, 1990). Rep. Silvio Conte (R-MA) once argued that the government should not be spending money looking for evidence of extraterrestrial intelligence because tabloid newspapers offered plenty of "proof" (Garber, 1999). In the early 1990s congressional staff persuaded NASA officials to change the name of their search program from the SETI Microwave Observing Project to the High Resolution Microwave Survey. The *Washington Post* said the name was changed because of "unscientific associations" between SETI and E.T.s, reporting that "in the public mind," SETI was linked "with Hollywood fantasy and supermarket tabloids" (Sawyer, 1992, p. A3). The following year Congress cancelled the project. Sen. Richard Bryan (D-NV) characterized the SETI cancellation as the end of taxpayer financing of a hunt for "Martians" (Garber, 1999).

While a number of factors likely contributed to the cancellation of NASA's SETI program, its location on the borders of legitimate science made a contribution.

The SETI community has built credibility and authority by recruiting credible scientists, attaching SETI to other credible scientific endeavors (radio astronomy, astrobiology), and creating its own research organization (the SETI Institute). A report from the National Academy of Sciences (National Research Council, 2003) noted that while SETI "has had a checkered reception by scientists and federal lawmakers," the SETI Institute "has accomplished in a spectacular way the founding of a science institute and the procurement of stable private funding to carry on the search" (p. 6). The institute's SETI project "is a carefully designed effort and worthy of notice by the scientific community and relevant federal agencies," largely "because world-class scientists lead the SETI Institute" (pg. 6). The Institute has "maintained a high standard of scientific research through its peer-reviewed research activities and articulated clearly and authoritatively the rationale for approaches to a comprehensive search for extraterrestrial intelligence" (p. 6).

SETI scientist Jill Tarter holds an endowed chair for SETI at the SETI Institute. Radio astronomer William Welch occupies the Watson and Marilyn Alverts Chair for the Search for Extraterrestrial Intelligence at the University of California, Berkeley. Welch's chair "is a recognition that [SETI] is a serious endeavor," Welch told *The New York Times* (Nieves, 1999, p. A14). Frank Drake, a University of California astronomy professor, president of the SETI Institute, and the scientist who conducted the first SETI

search, told the *Times* the chair was "an affirmation" that SETI had become mainstream science.

Inside and outside the scientific establishment, however, SETI continues to be connected with "little green men" and UFOs — what SETI proponents call "the giggle factor." NASA and the National Science Foundation continue to fund research on the origin, evolution and distribution of life in the universe up to but not including intelligent life, and SETI remains an endeavor that must depend on private funding to proceed.

Complementary and alternative medicine

Defenders of science tend to categorize complementary and alternative medicine (CAM) as pseudoscience, and thus it is worth a brief examination here. The National Institutes of Health has given CAM legitimacy by establishing a National Center for Complementary and Alternative Medicine (NCCAM) that is tasked with "exploring complementary and alternative healing practices in the context of rigorous science, training complementary and alternative medicine (CAM) researchers, and disseminating authoritative information to the public and professionals."[19] Nonetheless, some critics continue to classify CAM as "quackery" — for example, physician Stephen Barrett (n.d.), who maintains what he calls a "Quackwatch."[20]

While he has not called it quackery, Arnold S. Relman, M.D., emeritus professor at the Harvard Medical School, is not a fan of CAM. Relman is a vocal defender of the conventional boundaries of science, in particular the boundaries of his own area of

expertise, allopathic medicine. He is also a colleague and one-time mentor of John Mack, and he chaired the medical school investigation board that examined Mack's abduction research. Relman (1998) constructed a victimage ritual against CAM in the pages of *The New Republic* — where Gleick's (1994) polemic against Mack appeared. Relman (1998) made his case for the benefits of allopathic medicine and the pitfalls of alternative approaches in his 9,000-word piece, which was, like Gleick's, ostensibly a book review. But like Gleick's review, Relman's critique of eight books by Harvard Medical School graduate and CAM practitioner Andrew Weil on health and healing — subtitled "Andrew Weil, the boom in alternative medicine, and the retreat from science" — was more a critique of the author as a scientist than a writer. As Gleick did with Mack, Relman used Weil to represent all scientists who should know better than to stray so far outside the boundaries of conventional science

Relman identified Weil as a physician-writer, "guru" and leader in "the alternative medicine movement" (Part I, para. 1-2). As Gleick did with Mack, Relman portrayed Weil as a huckster, head of "a large and astonishingly successful medical marketing enterprise that might be called Dr. Andrew Weil Inc.," the "CEO of alternative medicine" (Part I, para. 3). As Gleick and other journalists did in writing about Mack, Relman noted that Weil had "revolted against [the] academic bastions" of Harvard, "experimented with mind-altering drugs" (Part I, para. 7) and pursued non-traditional interests (for Weil, Relman reported, they included yoga, vegetarianism, herbal medicine and ritualistic healing practices).

Labeling allopathic medicine scientific, standard, and "regular," Relman tagged Weil's alternative medicine old, pre-Christian, associating it with "Hinduism," "shamans" (Part I, para. 4) faith healing, and cults. "Leaders of the [medical] establishment believe in the scientific method…the rule of evidence, and…the laws of physics, biology and chemistry" (Part I, para. 5), Relman declared. Practitioners of alternative medicine "either do not seem to care about science or explicitly reject its premises" (Part I, para. 5). Their methods are "often based on notions totally at odds with science…. In advancing their claims, they do not appear to recognize the need for objective evidence" (Part I, para. 5). Weil's thinking "defies rational belief or is just plain wrong" (Part I, para. 13), encompassing "sweeping generalizations that cannot stand analysis" (Part I, para. 14). Some of Weil's claims "come ex cathedra from his own self-asserted authority as guru and healer" (Part II, para. 7). Weil "has published nothing in the peer-reviewed medical literature" (Part III, para. 15) to back his claims. Relman noted that Weil was editor of *Integrative Medicine*, a self-described "peer-reviewed journal...committed to gathering evidence for the safety and efficacy of all approaches to health according to the highest standard of scientific research, while remaining open to new paradigms and honoring the healing power of nature" (Part IV, para. 7). Relman dismissed the journal, saying "there already exist many leading peer-reviewed medical journals that will review…studies of alternative healing methods on their merits," and also noting that "only a few such studies have passed rigorous review and have been published in first-rate journals" (Part IV, para. 7). "In the absence of supporting evidence…skepticism is surely in order" (Part IV, para. 1). "If Weil cannot produce credible evidence to validate [his] claims," Relman asserted, "he cannot presume to wear the mantle of science" (Part IV, para. 5). "Do we

follow the universal rule of science…that objective, verifiable observation is the ultimate and final judge of the truth" (Part V, para. 11), Relman asked, or turn to Weil's subjective methods.

Again echoing critics of Mack, Relman blamed Weil and his ilk for contributing to "a swelling current of…anti-scientism that runs deep in our culture…a growing public distrust of the scientific outlook and a reawakening of interest in mysticism and spiritualism" (Part V, para. 6). Like Gleick and others did in their stories about Mack, Relman tagged Weil a believer rather than a knower: "he really does believe in miracles and in faith healing" (Part I, para. 19). Relman broached the subject of the separation of science and religion with his claim that "the rituals and meditations" Weil recommends for health and healing "contribute a quasi-religiosity to [CAM] practices" (Part V, para. 2). While allopathic medicine needs improvement, its practitioners must be vigilant in defending the boundaries of the field: "the medical establishment…must not lose its scientific compass or weaken its commitment to rational thought and the rule of evidence" (Part V, para. 12), Relman concluded.

In an interview with me (see Appendix B) Relman said *The New Republic* had approached him about writing the Weil review, and the idea "appealed to a long-standing interest I had in alternative medicine." Relman said he thinks of science as "a way of thinking, a tradition." The conventional scientific worldview is that "we live in a material universe [that] exists outside of the human brain" and can observe and participate in this universe. "The thinking mind doesn't create reality, but it interacts with that reality," he

said. Observations of that external reality indicate that it appears to behave according to fundamental laws, and survival depends on the ability to understand those physical laws, Relman said — in other words to describe and predict. The only way to know if something is true is to make a prediction based on a hypothesis and determine whether the hypothesis is falsifiable. "That's my view of the scientific basis of conventional medicine," Relman said. Weil and Mack "do not accept that formulation." They believe that mind, spirit, and emotion have an existence independent of the brain and can produce effects in the physical world. "We have to be very careful in teaching and practicing medicine" to distinguish what we know and what we conjecture in the science of medicine. "I don't think many people call [alternative medicine] science." Allopathic medicine "is both an art and a science," he said, a profession involving "humanistic as well as biological concerns." The aim of the science of medicine "is to understand, diagnose and treat," and it "depends critically on the development of new knowledge." The aim of the art of medicine is to understand the human heart and spirit, he said.

Conclusion

Ultimately the Case of the Deviant Doctor was unique in featuring a 100 percent "Harvard" professor; a blurry, contested, complex and ambiguous map of psychoanalysis, psychiatry, and psychology; an alternative scientific worldview; and perceived transgression of the boundary between science and religion. Comparison of the Mack case with other cases of contested science, however, highlights some important similarities: the importance of credentials, the rhetoric of claims making, and the resistance to rhetorical frames of acceptance in discourse about controversial science. In

some of the cases reviewed in this chapter, implicit or explicit links between science and spirituality were apparent: in paranormal science, for example, with the idea of a spirit world or afterlife; in SETI, with questions about the purpose and meaning of human existence. In the case of CAM, Relman's remarks about the science and the art of medicine hint at a means of transcending the conflict between his and Mack's scientific worldviews….

Notes

1. Whether inside or outside the boundaries of legitimacy, cold fusion has not disappeared from the science scene, however. The *Washington Post* (Weinberger, 2004) recently reported that while Pons has moved to France and "no longer works on cold fusion," Fleischmann has retired, and "research money has dried up" (p. 34), that a few respectable scientists, with enough clout to prompt a government review, continue to work on the cold fusion problem.
2. Information on CSICOP, unless otherwise attributed, was retrieved August 10, 2004, and May 11, 2005, from: http://www.CSICOP.org.
3. See, for example, CSICOP investigator Joe Nickell's rhetorical attempt to debunk John Mack's abduction claims, "A study of fantasy proneness in the thirteen cases of alleged encounters in John Mack's *Abduction*" (*Skeptical Inquirer,* May/June). Accessed on the World Wide Web October 12, 1999, at: http://www.csicop.org/si/9605/mack.html.
4. I heard Kurtz make these remarks at a convention of the Cultural Environment Movement in Athens, Ohio, on March 3, 1999.
5. Collins and Pinch (1982) reported that by the 1940s parapsychologists had obtained "endorsement of their statistical methods by one of the most authoritative groups of scientists, the mathematicians" (p. 157).
6. Information on the Parapsychological Association was retrieved May 10, 2005, from http://www.parapsych.org.

7. The former Duke University parapsychology lab was succeeded by the independent Rhine Research Center, a parapsychology research organization based near the Duke campus in Durham, NC. Information on the Rhine Research Center, which continues to operate today, was retrieved May 10, 2005, from http://www.rhine.org. (A search of Duke University's Web site for information on parapsychology research and the Rhine Research Center yielded only secondary references, in campus newspaper articles and in the university's archives.)
8. Information on the Society for Scientific Exploration was retrieved August 21, 2003, from http://www.scientificexploration.org/mission.html.
9. Information on the National Institute for Discovery Science was retrieved May 7, 2005, from http://www.nidsci.org. Las Vegas real-estate mogul Robert Bigelow is the creator and funder of NIDS.
10. See www.jacquesvallee.net.
11. See http://wwww.sbvpartners.com/vallee.html.
12. Sci Fi described "Taken" as fiction based on true stories. The series was broadcast in December 2002. Sci Fi said it sponsored the various elements of its "Taken" campaign "to shed light on the facts behind the fiction" of the series. Journalism professor and science writer Timothy Ferris (2003) wrote in CSICOP's *Skeptical Inquirer* that "Taken" told "a story that swallows every absurdity of the alien abduction myth," and he dismissed the series as "claptrap." (Ferris cited Mack in his article as "the Harvard psychologist who went belly up for abduction yarns.")

13. The CPI briefing took place on October 22, 2002; the Roper poll results were released in November; the UAP symposium occurred on November 8, and the abduction symposium occurred on November 22, 2002.
14. John Podesta, a principal in PodestaMattoon, served as White House chief of staff in the Clinton Administration. Along with Sci Fi representatives, Podesta participated in the Press Club announcement of the CFI.
15. On the day of the New York abduction symposium, for example, Sci Fi also aired a documentary, "The Roswell Crash: Startling New Evidence."
16. On his Web site Haisch states: "I believe that examining evidence that may challenge prevailing scientific dogma is good for science and a necessary part of searching for the truth…." He advocates "true skepticism…neither the gullible acceptance of true belief nor the closed-minded rejection of the scoffer masquerading as the skeptic." His Web site, he states, is intended to be "a respectable point of entry for any professional scientist interested in educating himself or herself on this controversial but possibly significant topic."
17. Press release, September 15, 2003, "1st annual Exopolitics Expo — the X-Conference — Hilton Washington, DC, North/Gaithersburg, April 16-18, 2004," Paradigm Research Group, Bethesda, MD. Available from http://www.paradigmclock.com/X-Conference%202004/X-Conference.htm.
18. From 1988 through 1993, off and on, I worked with NASA SETI project scientists on communication and advocacy planning. Some of the information in this section on SETI is based on my experience. Also see Note 25, Chapter 1.
19. Information obtained from http://nccam.nih.gov.

20. Barrett maintains a Quackwatch Web site dedicated to debunking "health-related frauds, myths, fads, and fallacies," such as the practice of chiropracty. The site is part of a larger Web-based service called Skeptic Ring. According to Barrett, quackery involves "promotion [of] "questionable ideas as well as questionable products and services" and "entails the use of methods that are not scientifically accepted." A quack practitioner "may be scientific in many respects and only minimally involved in unscientific practices."

Chapter 8

Discussion and conclusions: journalistic business as usual…

Discussion

The question driving this analysis was: how did journalists participate in the social construction of scientific authority in The Case of the Deviant Doctor? The answer is, in a word, routinely. Journalists did boundary-work by adhering to established journalistic practices and news routines, by following professional conventions. I began this study suspecting that journalists were acting atypically in reporting on Mack's abduction research, overreacting and exaggerating. But my analysis revealed that journalists were simply doing business as usual. As other studies have shown (e.g. Gans, 1979; Gitlin, 1980; Nelkin, 1995b; Shoemaker & Reese, 1996; Tuchman, 1972, 1974) and this study affirms, established journalistic practices and conventions lead reporters to reinforce the values, beliefs, and authority of their official sources. It is also the case that these same practices and conventions lead journalists, just as routinely, to maintain a skeptical attitude toward authority (see Dearing, 1995).

In interviews with me some of the journalists who wrote about Mack and his abduction research indicated, in other words, that their primary interests in writing these stories were complying with journalistic conventions and upholding journalistic values — doing

what journalists are supposed to do, the way they are supposed to do it, that is, reporting news, engaging readers, providing fair and balanced coverage, maintaining an objective stance and a skeptical attitude. In these interviews they also told me about personal interests that may have affected their reporting. None of the journalists I interviewed explicitly acknowledged playing any role in reinforcing worldviews and spotlighting deviance, nor did any explicitly refer to journalistic "values" or "conventions" or "routines." But, again, as shown by previous research and as illustrated by this analysis, following professional conventions is the means by which journalists participate in constructing and maintaining social and cultural conventions. In exploring how journalists participate in the social construction of scientific authority, I have at least begun to address why they participate as well. If "how" is routine, then "why" is to maintain order. If "how" is symbolic action, then "why" is meaning making.. If "how" is ritual performance, then "why" is to maintain culture over time.

Journalists decide on what is news, Schudson (2003) said, out of routine adherence to "durable journalistic conventions" (p. 50). They "live in a world of practices," as Carey (1997) observed, focusing on "the procedures, rules and conventions by which [they] go about their business" (p. 331). This study has shown that these conventions and practices can be durable over time and place, individual reporters, and specific media outlets; the findings of key studies now 20 to 30 years old (e.g. Gans, 1979; Gitlin, 1980; Tuchman, 1974, 1972) appear to hold fast. "Of all the institutions of daily life," Gitlin observed (1980), "the media specialize in orchestrating everyday consciousness.... They certify reality *as* reality" (p. 2). Journalists apply "principles of selection, emphasis, and

presentation composed of little tacit theories about what exists, what happens, and what matters," Gitlin wrote, "persistent patterns of cognition, interpretation, and presentation of selection, emphasis, and exclusion, by which symbol-handlers routinely organize discourse" (pp. 6-7), for themselves and for their audiences. Journalists in this case appeared to follow Gitlin's template routinely. Schudson (2003) noted that "decisions inherent in the manufacture of news" are influenced by "the marketplace, the nature of organizations, and the assumptions of news professionals" as well as with "individual bias" (p. 47). That said, Schudson also noted, "The person who writes the story matters" (ibid. p. 47). This analysis affirms Schudson's assessments.

Journalistic rituals

This analysis has examined the work of journalists situated in what Zelizer (1994) called "an interpretive community," a community "united through its shared discourse and collective interpretations of key public events" (p. 402). It is a community in which journalists may abide by accepted conventions and respect accepted boundaries "without ever actually being informed of them by superiors" (p. 403). Even journalists' repetition of particular narratives across media may be a community-building exercise, having "as much to do with connecting journalists with each other as it does with audience comprehension or message relay" (p. 404). As noted in Chapter 1, Zelizer (1997a) has suggested that it could be useful for mass communication research to examine the ritual functions of journalism, as narrative or as performance. This study illuminates a case of journalistic ritual that could be described as either a narrative — the story of a heroic journey — or a performance — journalists doing their part to maintain social order.

Routine drove journalists' participation in constructing the cultural authority of science in this case, but of course the process was more complex than that. "Culture is the ensemble of practices through which order is imposed on chaos. These practices constitute communication," according to Carey (1997, p. 314). If communication is conceived as culture, as it is in this analysis, then journalism has a ritual function. Ritual, Carey said, "is the principal means…through which chaos is controlled and order is imposed on…human action" (p. 314), and journalism ritually contributes to containing cultural chaos and maintaining social order. Journalism is a cultural practice "of world making, of the making of meaning" (p. 331). By following journalistic routines and enforcing established news values, as Gans (1979) noted, journalists fulfill a range of functions, from maintaining social order and safeguarding moral values to making myths, performing prophetic and priestly rituals, and managing "the symbolic arena" (p. 298). The function of journalistic routines was notable in this case. The function of journalistic ritual was evident as well.

Initially it was disappointing to see how conventional these stories appeared to be. But beneath the veneer of journalistic business as usual — the pragmatic, routine spotlighting of conflict, authority, and transgression and striving for fairness, balance and clarity — I ultimately saw order-keeping, boundary-tending rituals being performed. And as ritual acts, the texts became interesting all over again. As shown in Chapters 5 and 6, some served as ritual, public, punishments for Mack's transgression of the boundaries of science (the rhetorical equivalent of a flogging in Harvard Square). In some sense, I

would argue, the entire body of media texts selected for analysis in this study functioned as a ritual flogging, a public spectacle, with even those stories that did not explicitly criticize Mack contributing to the overall public examination of his perceived transgressions.

Stories served a parallel and conflicting ritual purpose, too, depicting Mack as a heroic figure and recapitulating his journey into the unknown. They told a tale of Mack's call to the adventure of abduction research, his departure from the positivistic worldview and other conventions of science, his initiation into "numinous" reality and "subtle" realms, and his attempt to return, if not with the world-restoring elixir of new knowledge at least with a vow to continue to look for it. The mythic hero typically learns on his journey that the worlds of the divine and the human "are actually one" (Campbell, 1949, p. 217). What the hero comes to understand is that "the realm of the gods is a forgotten dimension of the world we know" (p. 217) — a claim that Mack made, and journalists reported, frequently.

This study might be described as what McKerrow (1989) called a "polysemic" rhetorical critique, an analysis that "uncovers a subordinate or secondary reading which contains the seeds of subversion or rejection of authority, at the same time that the primary reading appears to confirm the power of the dominant cultural norms" (p. 108). Overtly and pragmatically, journalists in this case did boundary-work routinely, by following conventions. More subtly and symbolically, journalists did boundary-work by the ritual reinforcement of scientific norms. The journalistic metanarrative explored in this study

aimed at identification with "the public" and with elites, offering entertainment coupled with affirmation of social order in the form of the conventional boundaries of science. The subversive subtext aimed at identification with the maverick, division from elites.

In keeping with the idea of the polysemic reading, Burke's (1969a) concept of the representative anecdote is useful to apply in this analysis. A representative anecdote, Burke said, is a selection rather than a reflection of reality, conveying the essential vocabulary of a common narrative. (Campbell (1949) or Carey (1992) might call them myths.) There may be two competing representative anecdotes in this case. One — a narrative of an expert's transgression of the boundaries of convention, a warning against taking the risk of a fall from grace and a loss of authority — maintains the ideology of the conventional scientific worldview. The other — a narrative of an authority's long history of accomplishments and transgressions, his foray into controversial research, and the maintenance of his authority in the face of rejection — maintains the ideology of scientific/academic/American freedom of thought and speech, affirming that scientists may ask outrageous questions and tread unbeaten paths, that (tenured) academics may march to their own ideological drummers, that Americans may trip the quite-fantastic and still keep their jobs. Both affirm beliefs about what scientific authority is and should be. One asserts that within the confines of the conventional scientific worldview, science can explain the world, and that the task of scientific authorities is to dispel ambiguity and complexity by explaining things. The other asserts that ambiguity and complexity are inherent to reality, that mystery is a fact of life.

From a philosophical perspective, the basic question of scientific ontology is "what is there?" (Worrall, 1994, p. xi), and the basic answer to this question is "everything." Within a broad rhetorical frame of acceptance, the question and the answer are reasonable and sensible. The conventional scientific worldview, however, functions as a frame of rejection, and thus from a scientific perspective the question becomes, more narrowly, "what, in view of the evidence we have, and in particular in view of the evidence accumulated by science, is it reasonable to believe that there is?" (p. xi). Mack proposed that the conventional scientific worldview might be inadequate to explain "everything." Journalists responded that "everything" that fit within the frame of the conventional scientific worldview was what constituted reality. If it did not fit, it was not real. But then journalists sometimes left the door open to the possibility that Mack might be onto something.

Brante (1993) delineated a difference between controversial science — epistemological conflicts over science claims, involving "contradictory scientific beliefs" — and science controversies — sociopolitical conflicts over "contending knowledge claims where at least one of the parties has scientific status" (p. 181). (Brante also noted that, "in certain respects, the difference between scientific and science-based controversies is a matter of degree" (p. 181). The Case of the Deviant Doctor was not a typical case of scientific controversy or controversial science. Stories about Mack's abduction research ultimately did not focus on resolving the question of whether abductions were real. Mack himself became the controversy — an authority, a member of the scientific elite pursuing questionable research, using unconventional research methods, espousing a contrary

worldview. The right of a tenured professor at Harvard to speak with authority about what is real and relevant and what is not generally goes unquestioned. Journalists were more concerned with the authority, credibility, and legitimacy of the scientist than they were with the authority, credibility, and legitimacy of his science. For them, Mack represented Harvard, and Harvard represented scientific authority.

The metanarrative examined herein began with a scientist doing what scientists are typically expected to do: confronting a mystery, formulating a hypothesis, observing the phenomenon, and speculating on possible explanations for it. The story ended with the mystery unsolved, the phenomenon unexplained. Over the course of this case, Mack did boundary-work like all good scientific authorities do: by ritual incantation of credentials, methods, evidence, detachment. It may be reasonable to assume that boundary-work by a scientific authority will be more effective than boundary-work by journalists; while this analysis does not prove this assumption, it does yield evidence that journalists could not demolish Mack's authority because, at least in part, I would argue, he was better than they were at boundary-work. When the rhetorical dust settled, Mack was still standing, credentials and funding intact (with at least enough for him to continue doing what he wanted to do), still able to publish his expert opinions on the prestigious op-ed page of *The New York Times* (though not, it must be noted, his opinions on abduction). He still had his authority, perhaps somewhat scratched and dented, but functional. But it is not at all clear whether, a hundred years from now, Mack's case will be depicted in the history of science as more like Darwin's or Pons and Fleischmann's (see Chapter 7).

Conclusions…

Being productive

The scholarly value of studying communication "in terms of a ritual model," said Carey (1992, p. 35), is that it provides a way of thinking about the potential "restorative value" of communication "in reshaping our common culture," explaining how ideas and experiences are shared, how values and norms are constructed and relayed, how order and authority are created and maintained. "Research on popular science communication," Dunwoody (1992) noted, "will endure only to the extent that it illuminates general processes important to mediated communication of all types of information" (p. 14). Employing the ritual conception of communication in this analysis has enabled some illumination of these processes.

In conducting this analysis I have attempted to heed the critique that social constructivists avoid "intentional interventions in the processes they now only observe" (Hamlett, 2003, p. 134) and thus fall short of doing relevant work (see Hamlett, 2003, for a review of this critique). Criticism "that shuns overt politics is either ignorant of or masking its own investments in the status quo," according to Cloud (2001); "even when criticism claims to be descriptive of social reality rather than offering normative correctives…the retreat into description is profoundly ideological" (para. 1). Cloud's assertions are relevant to this analysis, as well as to some of the texts analyzed herein (e.g. Gleick, 1994; Miles, 1994; Rucker, 1994). Though he often acknowledged his own worldview and interests in

writing and talking about abduction, even Mack could be faulted for falling back on the objective, detached language of conventional science in order to distance his abduction claims from his interests. “Socially and morally involved” rhetorical criticism aims, as Klumpp and Hollihan (1989) observed to “illuminate the mystery” (p. 84) of social order— ‘bring it to consciousness, and you introduce the possibility of change” (p. 93).

The aim of this analysis has been productive criticism, described by Ivie (1995) as an approach to critique resting on the assumption that a critic cannot produce critique “without purpose, intent, or benefit of perspective” (n.p.). I have attempted to acknowledge, maintain and refine an awareness of my purpose, intent, and perspective throughout this analysis. It has been said that productive criticism should prompt its audience “to think or act differently and in socially responsible ways” (Nothstine, Blair & Copeland, 1994, p. 4). My hope is that the results of this analysis may prompt its audience to do so. I intend for the results of this act of productive criticism to be useful in heightening journalists’ awareness of their own rhetorical strategies and aims, an awareness that might help them to make more informed decisions about the ways in which they communicate about science. For this reason I hope these results will be of interest to teachers of journalism, too. In the best of all possible worlds, these findings will prove useful to scientists as well, toward the same ends. I am already applying my findings in my daily work with scientists and journalists.

Journalists and scientists both claim authority to inform the public about science. This right to inform can be said to entail a responsibility. The linkage between right and

responsibility may be a bridge by which journalists and scientists might transcend the debunking strategy so commonly used in discourse about claims made and contested in the name of science. The frame of rejection known as debunking "becomes a colossal enterprise in 'transcendence downwards' that is good for polemical, *disintegrative* purposes," said Burke (1984, pp. 92-93). Burke recommended broadening and reorienting rhetorical frames to better understand problems and resolve conflicts. "A well rounded frame serves as an amplifying device," he said (1984, p. 103), revealing how things inside the frame are connected. Burke recommended transcending conflict by developing "a unifying attitude." A comic corrective to debunking strategies, as proposed in Chapter 6, would enable both journalists and scientists to develop and maintain their own partial perspectives without necessarily rejecting others. "The comic frame is charitable, but...not gullible," Burke noted (1984, 107). Such a corrective strategy would enable them to be agnostic (doubting but accepting) rather than atheistic (non-believing and rejecting). Acceptance does not require approval or endorsement and is thus a suitable stance for skeptics.

The comic corrective outlined in this critique would aim to broaden, amplify, and accommodate perspectives on the abduction phenomenon, to reconcile what appear to be conflicting conceptions of reality. A comic frame of acceptance could provide a way of establishing common ground and deciding how to proceed from there. Within such a frame, perhaps there could be agreement that thousands of people believe they have been abducted by aliens, that these people are not "crazy," that not enough is known about their experiences to explain them. Comic corrective is not a panacea, as Burke noted.

However, a comic corrective such as the one outlined here could aim to promote tolerance and acceptance, avoid rejection, and broaden public dialogue about the nature, function, purposes, and effects of the way of knowing, the professional practice, the cultural institution known as science. Such a corrective would permit those involved in the dialogue to transcend the sort of polarized debate so common in public discourse about science, moving beyond disputes over which perspectives are valid to determine which are useful.

Perhaps journalists and scientists might consider accepting, if only for the sake of peace, that, as Haraway (1991) explained, multiple perspectives provide a more complete and thus "better" picture of reality. "The important thing," as Burke (1984) pointed out, "is to continue the search for a comic vocabulary of motives...that could provide humility without humiliation" (p. 344). (Though in Chapter 6 I outlined a possible comic corrective to his polemic against Mack, I must confess that I suspect James Gleick (1994) would not be interested in employing comic correctives and other frames of acceptance. I would like to think, however, that Arnold Relman (1998) might be more open to the idea….)

According to the mission statement of the Society of Professional Journalists (SPJ, n.d.), "People must be well informed in order to make decisions regarding their lives... It is the role of journalists to provide this information in an accurate, comprehensive, timely and understandable manner" (n.p.). Most journalists, if asked, would say that their jobs are to find the news, get the facts, and tell the truth. Some journalists are provided formalized

rules to follow on the job. Many are not. (And sometimes reporters who have rules to follow flout them, as in the case of *The New York Times* and Jayson Blair – see Hindman, 2005). In any case, it is not reasonable to expect that these rules, as far as they exist, should provide tutorials in rhetorical analysis. But in the public understanding of science, rhetoric, as Gross (1994) said, "is both a theory capable of analysing [sic] public understanding and an activity capable of creating it" (p. 3). Thus it is important for journalists to have some awareness of the roles of rhetoric in science.

By reporting the rhetoric of science as supplied by official sources — unfiltered, as it were — journalists reinforce the values and authority of those sources. But while journalists participate in constructing and reconstructing scientific authority in reporting science news, as illustrated in this case study, they are not necessarily as fully aware as they might be of what they are accomplishing. While, as Schudson (2003) observed, journalistic conventions are durable, they are not immutable. If by following established conventions in doing their work, reporters can reinforce those conventions, then it is certainly within reason to assume that reporters could examine and adjust them as needed in the process. Journalistic texts could be viewed as Burkean equipment for living, "a ritualistic way of arming us to confront perplexities and risks…to protect us" (Burke, 1973, p. 61). The stories examined in this analysis employed narrow frames of rejection to protect readers from irrationality and uncertainty. Stories constructed in broader frames of acceptance, "guided by broad and diffuse values and interests" as Restivo (1989) has proposed, could provide protection from incomplete perspectives.

Mindful journalism, multiperspectival news

Stocking[1] recommends that journalists practice what she calls "mindful journalism," a more thoughtful way of going about their jobs. For me, the term invokes the Buddhist concept of mindfulness. The attitude of mindfulness requires a sort of de-self-centering, thinking with one's "whole mind" and avoiding "one-sided" thinking (Suzuki, 1970, p. 115). "The point is to be ready for observing things, and to be ready for thinking. By being prepared, "there is no need to make an effort to think. This is called mindfulness" (p. 115). This conception of mindfulness meshes neatly with Burke's conception of broadening the frame.

By being more mindful — thoughtful, open, aware — in their reporting, by routinely contemplating what they are doing before, during and after doing it, journalists reporting on science, and other things, could enrich their existing routines, expand their frames of reference and sharpen their awareness of the values, biases, and assumptions embedded in official sources of news and in their own attitudes about the news. In science reporting, journalists could benefit by improving their understanding of the cultural values embedded in the news their official and authoritative science sources provide. More conscious participation in maintaining the boundaries of science and sustaining the cultural authority of scientists could render the deployment of that authority, and the authority of journalists as well, more productive and responsive.

Gans (1979) proposed that media outlets adopt a model of "multiperspectival news" toward broadening their perspectives and giving their audiences more well-rounded

pictures of reality. Multiperspectival news would be less biased and more national (for instance, less Washington-centric). It would provide bottom-up as well as top-down views, offer more "output news" and "service news," and "aim to be more representative" (p. 313). Reporting of science and other sorts of news could benefit from such a multiperspectival approach.

As noted in Chapter 2, M. G. Durham (1998) has pointed out that journalists typically operate "inside the dominant social order," reporting "about those who are either inside or outside it, with no overt acknowledgment of these social locations or the implications thereof" (p. 129). Elite print media coverage of John Mack's abduction research, as described herein, appeared to fit this description. Following Gans and drawing on feminist science theory, Durham has argued for "strong objectivity" in journalism, a concept derived from feminist standpoint epistemology (see Harding, 1991; Keller, 1985). A convention of strong objectivity could, she argued, "advance journalism by compelling journalists to rethink themselves and their craft from the position of marginalized Others" (p. 132).

Analyst's perspective, part I: productive options

My current work involves observation and analysis of science communication in action. I have observed that many scientists who claim an interest in improving science communication are operating on the assumption that as scientists they are better qualified to communicate about science than professional communicators are, while these

communicators are more likely to operate on the assumption that good science communication depends on collaboration between communicators and scientists. I have found that collaboration is by far the best route to successful science communication. I have had many privileged encounters with prominent scientists, up close and at arm's length, over 30 years of working in Washington. But in spite of this privileged access, the more I learn about the practice and the politics of science, the more deeply concerned I become about the potential for abuse of the power that scientists (and others) wield in the name of science. The politics of science in the Bush administration, as documented by the Center for Science in the Public Interest, Union of Concerned Scientists, and U.S. Congressman Henry Waxman, among others, have made me all the more distrustful. But yet I still yearn for science to come to the rescue — from environmental degradation, food shortage, global plagues, toxic poisoning…. And at the same time I grow less hopeful that science will come through.

My work puts me in daily contact with journalists and scientists. These scientists are responsible for government-funded research programs worth hundreds of millions of dollars a year or more. These journalists report on science and technology for a variety of outlets ranging from *The New York Times* to *Aviation Week & Space Technology*. When I talk with scientists about their cultural authority and the responsibilities it entails, they shake their heads: some *other* scientists might have authority, they say, but not them. Journalists I talk with have little conception of their own cultural authority. My plea, to all journalists and scientists who are interested in making their professions better, is that they acknowledge their possession of cultural authority, understand what it is and where

it comes from and what they can accomplish with it, and act responsibly in accordance with these understandings. I believe that journalists and scientists would benefit, as would their constituencies, from acquiring a more thorough understanding of the histories and cultures of their own as well as each others' professions. I intend to apply the findings of this study in working with journalists and scientists on improving communication with the public about science, focusing especially on developing and deploying strategies for communicating about science that avoid debunking and other strategies of rejection. Communicating with the public about science from a stance of acceptance is necessary to advancing my goal of expanding public participation in science policy making.

In my everyday life I have already begun to take what I intend to be productive action based on my findings in this study. I am participating in a science communication working group sponsored by the NASA Astrobiology Institute (NAI) and including members from science, academia, and journalism; this group is a promising forum for the exchange of ideas about communications between scientists and journalists. I intend to submit a paper for presentation to the biennial congress of the international Committee on Space Research (COSPAR) (scheduled for July 2006 in Beijing) entitled, "Scientists are from Saturn, journalists are from Jupiter," characterizing scientific and journalistic cultures and practices and speculating about how what is called the gap between scientists and journalists may be bridged (and I will likely propose a similar presentation for the NAI's 2007 biennial meeting).

I have accepted an invitation from the Association for Politics and the Life Sciences to

participate in a discussion about bridging this gap at the association's 2005 annual meeting in Washington, DC; I am also organizing a panel discussion for this meeting on best practices in science and risk communication (featuring, of course, speakers whose thinking I like…). I am organizing a session for the National Association of Science Writers' (NASW's) fall 2005 workshop in Pittsburgh, PA, entitled "Who speaks for science?" – I intend for this panel discussion to feature academics and practitioners who can speak about the construction and deployment of scientific authority. I am mentoring an NASW student member who aspires to be a science writer. In 2004 and 2005, I hosted lunchtime discussions about space science reporting at NASW workshops in Seattle, WA, and Washington, DC. At the Society for Environmental Journalists' (SEJ's) 2005 annual meeting in Pittsburgh, I hosted a dinner discussion on the same subject. I intend to continue practicing what I preach.

Analyst's perspective, Part II: science in culture

I keep hearing and reading that scientists are abandoning the cognitive deficit model of communication, that the science wars are over, that science communication is vastly improved compared to the dark ages of the 1970s and before. While I cannot refute these claims, I can say that I continue to encounter defensive maneuvers against perceived threats to the conventional scientific worldview. For example, in 2003 a handful of self-described scientific thinkers initiated the so-called "bright" movement, a rhetorical campaign waged in the mass media to defend "skeptics, nonbelievers, nontheists, atheists, agnostics, heretics, infidels, free thinkers, humanists, secular humanists and the like" (Shermer, 2003) against fundamentalist "believers" who reject the accepted

scientific worldview and its explanations for the origin of the universe and the evolution of life. Evolutionary biologist Richard Dawkins affiliated himself with the bright movement and published an editorial about it in *The Guardian* of London. In *The New York Times*, philosopher of consciousness Daniel Dennett declared himself a bright. Dinesh D'Souza praised the brights in the *Wall St. Journal*. Dawkins (as cited by Shermer, 2003) claimed "brights constitute 60% of American scientists, and a stunning 93% of those scientists good enough to be elected to the elite National Academy of Sciences" (n.p.). Dennett (as cited by Shermer, 2003) declared, "We are the moral backbone of the nation: brights take their civic duties seriously precisely because they don't trust God to save humanity from its follies" (n.p.). Even some fellow skeptics, however, took offense at the elitist attitude conveyed by the "bright" rhetoric, and the movement has not picked up much steam since its advocates went public.

Lawrence Krauss, chair of the physics department at Case Western Reserve University and better known as the author of *The Physics of Star Trek*, claims science is under attack, by proponents of creationism, intelligent design, and other ideas that blur the boundary between science and religion. Krauss (2004) has said scientists should not be fearful of offending religious sensibilities, especially when they are "nonsense." He has also asserted that theologians would benefit from listening to knowledgeable scientists (such as himself) and should feel obligated to do so; he has said scientists should feel no obligation to listen to them, however. Intelligent design is "close-minded, dishonest, and unfair," Krauss (2003) has asserted, "a case of creating controversy when there isn't any...debate when there isn't any" (n.p.). Science has an ethos of "honesty, open-

mindedness, creativity, egalitarianism, full disclosure" (n.p.). Keeping an open mind is a matter of conforming one's thinking to reality, he has observed, while close-minded thinkers make reality conform to their thinking. "In a democratic society," Krauss (2004) has said, "everything should be open to debate" (n.p.). However, journalists need to consider "that some things are not open to debate…. Many times there are two sides" to a story, and "one side is wrong," and in these cases "journalists have an obligation" (n.p.) to report the scientific, right, view. Complaining about public interest in UFOs and aliens, Krauss (1999) wrote in *The New York Times*, "Mountains of statistics suggest that the public is…susceptible to scientific nonsense…. Many people simply do not have the tools to distinguish charlatans from honest researchers" (p. A21), and journalists must take care to distinguish fact from fiction in reporting on these subjects.

Like Mack, Krauss is a tenured professor at a well known research university. Like Mack, he has sold enough books about science to be able to publish his opinions about the subject in *The New York Times*. He received the American Association for the Advancement of Science's 1999-2000 Award for the Public Understanding of Science and the American Physical Society's 2001 Edgar Lilienfeld Prize, for "extraordinary achievement in communicating the essence of physical science to the general public."[2] His favored rhetorical strategy, however, is debunking. The foundation of his terministic screen of debunking terms is a cluster of words at whose center are "wrong" and "nonsense." Krauss's rhetorical motive is to identify with people who think scientifically — that is, like he does — people who make sense, not nonsense.

New York University physicist and popular science author Michio Kaku employs a similar rhetorical style. Kaku (1999) has asserted that journalists do not know about or understand science, blaming them for public ignorance about scientific matters. Employing a terministic screen of terms of ignorance, he has further spread the blame, complaining of stupid science teachers, stupid people, stupid ideas, and stupid claims disguised as facts. Like Krauss, Kaku attempts to identify with scientific thinkers rather than aiming to persuade people with different perspectives to consider his views.

While public opinion is generally favorable toward science and scientists (National Science Board, 2004), people are nonetheless inclined to be skeptical about claims to scientific authority and "right" scientific knowledge (Lewenstein, 1995; Nelkin, 1996). Public opinion researcher Daniel Yankelovich (2003) has asserted that scientists and non-scientists "operate out of vastly different worldviews, especially in relation to assumptions about what constitutes knowledge.... Scientists share a worldview that presupposes rationality, lawfulness, and orderliness," while public life "is shot through...with irrationality, discontinuity and disorder…. Science has reached greater heights of sophistication and productivity, while the gap between science and public life has grown ever larger and more dangerous." While scientists "are highly respected," he has said, they are "not nearly as influential as they should be" (n.p.).

Broader frames

I am disheartened to see the kinds of rhetorical strategies that Dawkins and Krauss employ singled out as worthy of praise, and even emulation (and, toward being

productive, I am campaigning for the nomination of more deserving candidates for the kinds of science communication awards that have been bestowed upon the likes of Dawkins and Krauss). Such narrow frames of rejection are not effective strategies for identifying with audiences who have not already embraced the rhetor's views. As Carey (1992) has observed, "the presumption that living in scientific frames of reference is unequivocally superior to aesthetic, commonsensical, or religious ones" is a "scientific conceit" (p. 66). Restivo (1989) has argued that the best epistemic strategy is not the Western scientific worldview, depending on the demarcation between science and non-science and therefore inherently limiting. A preferable, broader perspective would be a "general strategy distinguished by its *capacity* for criticism, reflexivity, and meta-inquiry" (p. 168). The idea of objectivity, in Restivo's view, "depends on inquiry that is guided by broad and diffuse values and interests rather than by the values and interests of specific organizations, institutions, or social classes" (p. 174). What science needs in order to thrive is anarchy — that is, "opposition to the principle of Authority, and to all constraints rooted in institutions organized in terms of that principle" (p. 145).

Harding (1991) has suggested "eliminating sexist bias" in science "might require redefining objectivity, rationality, and scientific method" (p. 19). Keller (1985) has proposed re-conceiving objectivity as "dynamic objectivity" — the idea of "pursuit of maximally authentic and reliable understanding of the world," relying on "our own connectivity with [and subjective experience of] that world" (p. 116). "Sustained, rational, objective inquiry" is possible in an "epistemology of partial perspectives",

Haraway (1991) has observed; "the goal is better accounts of the world, that is, 'science'" (pp. 191, 196).

To non-experts, perhaps science does appear to be "a golem," as Collins and Pinch (1993) observed, a powerful entity that "grows a little more powerful every day...will follow orders, do your work, and protect you" but "is clumsy and dangerous. Without control, the golem may destroy its masters with its flailing vigor" (p. 1). Ben-David (1991) surmised that the rise of "anti-science" sentiment is a product of growing "disillusionment with the Western democratic liberal social order of which science has been an integral part" (p. 20). "New Age," alternative science, Ross (1991) observed, "has assumed a virtuoso, experimental role in reconstructing a humanistic *personality* for science — science with a human face…. This appeal to personalism is deeply rooted in popular distrust of authority and the desire for self-control" (p. 28).

Perhaps public interest in what science advocates call pseudoscience, New Age science or mysticism is not an indication of "anti-science" sentiment. In a broader frame of acceptance, it could be seen as an indication of a desire to expand the boundaries of science and broaden possibilities for answering questions, resolving mysteries, explaining and understanding reality. What science advocates interpret as an expression of public distrust or ignorance of science may be, instead, an expression of increasing public knowledge and understanding about science and a resulting tendency to turn to science more frequently for problem solving. As Toumey (1996) observed, "science is a matrix of meanings…abstract and intangible. To understand them…we…need…symbols: stories

rituals, image, emblems, slogans, virtues and role models" (p. 131). If positivistic science cannot explain a phenomenon, perhaps some other sort of science can.

Future directions

As I noted in Chapter 1, given the individual perspective and idiosyncratic approach I have applied to this analysis, the results of this analysis are unique. But I hope that my findings may provoke some new studies. The purpose of qualitative research, Pauly (1991) said, is not to answer questions but to foster discussion and debate. This analysis has yielded an answer to the question that drove it. I believe it is likely generalizable, given its affirmation of a solid body of literature. The results of this exercise in productive rhetorical criticism certainly raise other questions worthy of further discussion and exploration.

As Gross (1995) observed, while everything scientific may not necessarily be rhetorical, "everything scientific is, potentially, subject to rhetorical analysis" (p. 38). As I noted in Chapter 1, this study was not designed to be replicated. The interpretations and analysis offered herein are uniquely mine. It would be interesting to see, however, what other analysts with other perspectives and taking different approaches might come up with if they took on this case. The metanarrative constructed for the purposes of this analysis is rich with material for further exploration, in any case. Winch (1997) concluded in his study of boundary-work in journalism that further studies of boundary-work should "examine [1] how audiences perceive these same boundaries, and [2] how the public confers cultural authority...." (p. 164). Both of these questions are worthy of study and

could guide further analysis of the Case of the Deviant Doctor. Lamont & Molnar (2002) suggested that "more work is needed to integrate the psychological, cultural, and social mechanisms involved in this process of boundary construction" (p. 170). While this study focused on rhetorical critique, further analysis of the Case of the Deviant Doctor could address their interests. Some of the individual texts examined in this study — for example, Gleick's (1994) and Relman's (1998) intriguing defensive reviews for *The New Republic* — are worthy of deeper exploration and could stand alone as subjects of rhetorical analysis. It would be interesting to apply the analytic framework I employed in this case study to analysis of other cases of controversial science. And some of the comparative cases examined briefly in Chapter 7 are ripe for deeper sociological or rhetorical exploration. Further exploration of the fringe media, especially the proliferation of online media catering to audiences interested in UFOlogy and paranormal science, seems especially promising, particularly in light of what appears to me to be a stalemate between committed skeptics concerned about what they call science illiteracy and dedicated proponents of what Mack would call more expansive worldviews.

This analysis, while informed by critical and cultural theoretical perspectives, has not been conducted strictly as a critical cultural study. This case, however, appears to be rich ground for such a study focused on the deployment of cultural authority (scientific or journalistic), a study of power operating from the bottom up, as Foucault (1980, 1972) described it, power that arises out of everyday practices, the continual jockeying among social actors for authority, status, and control. This case is also a promising site for a Foucauldian exploration of the power struggle between local knowledge (experience) and

"the institutions and…effects of the knowledge and power that invests scientific discourse" (Foucault, 1979, p. 87).[3]

According to McMullin (1987), scientific controversies end by resolution, closure, or abandonment. In this case there was no resolution or closure. Journalists may have abandoned the story. But it is more likely that they simply responded to Mack's avoidance of the press. This case will likely remain unsolved, the drama inconclusive, until and unless a scientific authority of Mack's stature (Harvard-Pulitzer equivalent) and character (boundary transgressor) attempts to continue and complete it.

Notes

1. Indiana University journalism professor S. Holly Stocking is writing a book about mindful journalism. My understanding of this concept is based solely on conversations with her.
2. Information obtained from Krauss's online biography. Accessed on the World Wide Web December 29, 2004, at: http://www.cwru.edu/~krauss/bio.html.)
3. In May 2005, as I was completing this manuscript, I attended several sessions of the journalism studies section of the International Communication Association (ICA) at ICA's annual meeting in New York City and was (and am) intrigued by discussions there about developing new and improved theories and models of journalism. Should scholars develop a theoretical model to explain what journalism is and how it works and then shoehorn the everyday practice of journalism into this model? Or should scholars observe how journalism functions and the roles it fills in everyday life, think about why it is the way it is, and speculate about how it might be? (In the Mack case, of course, a similar discussion took place, in which scientists defending what they presented as the conventional scientific worldview argued that reality must fit theory/model/worldview, while Mack argued that theory/model/worldview should fit reality.) I prefer the inductive approach of theorizing from observation, though both perspectives likely have something to contribute to the ongoing discourse

about journalism. I hope that my findings might be of interest to scholars interested in better understanding journalism.

Epilogue

On September 27, 2004, eight years after I first encountered The Case of the Deviant Doctor in the texts explored for this study, John Mack died, victim of a drunk driver in London, where he had traveled to speak at a symposium of the T.E. Lawrence Society. An obituary in *The New York Times* (Bayot, 2004) identified Mack as "a Pulitzer Prize winner and Harvard psychiatrist who studied people who said they had encounters with alien beings" (p. A27). The *Times* reported that Mack "was drawn to psychoanalytic analysis of the misunderstood or vulnerable, including children contemplating suicide, teenagers troubled by the threat of nuclear war and finally, people plagued by what they believed to be recurrent alien encounters" (p. A27). Citing Mack's abduction research, the book *Abduction* (Mack, 1994a), and Harvard Medical School's Mack investigation, the *Times* also noted that *Abduction* "focused less on whether aliens were real than on the spiritual effects of perceived encounters, arguing that 'the abduction phenomenon has important philosophical, spiritual and social implications' for everyone" (p. A27).

In its obituary, the *Boston Globe* (Feeney, 2004) described Mack as "a Pulitzer Prize-winning author and Harvard Medical School professor whose research on purported extraterrestrial abductions generated widespread publicity and controversy" (para. 1). An obituary in the *Los Angeles Times* (Rourke, 2004) identified him as "a Pulitzer-Prize-winning author and professor of psychiatry at Harvard" who "stirred controversy with his research," and concluded, "Though his critics at [Harvard] claimed he was no longer taken seriously, others saw him as a pioneer in the field of mental health" (para. 8).

Science magazine's obituary tagged Mack an "explorer of the unknown" (Bhattacharjee, 2004, p. 405). Like the newspapers, *Science* identified Mack as "a Harvard psychiatrist whose research into claims of alien abduction sparked controversy" and who was "best known for his work that takes a sympathetic view of those describing encounters with aliens" (p. 405).

Through their online communication networks, UFO/abduction/conspiracy buffs processed the news of Mack's death.[1] There was some speculation that perhaps the U.S. government had had Mack assassinated. At an atheism Web site, a critic characterized Mack as a Harvard professor "who became famous in popular American culture for his unscientific promotion of the idea that people are abducted by aliens for weird medical experiments…this man was an embarrassment to Harvard and to the medical community…." In a posting at Above Top Secret (which bills itself as "the Internet's most popular conspiracy discussion forum") an admirer said Mack "was the kind of scholar the world needed: openminded to new possibilities, and thinking outside the box, pushing the boundaries of what is acceptable to believe in. He was a blessing for the UFO community."

Boston University film professor Steve Geller, who knew Mack, remembered him as "a perfect definition of the best of the methods of science and of academic discipline. Because of the nature of his work, he made enemies in his profession, and in academia. But by his behavior during the Harvard debacle, he proved himself to be tougher, more rigorous academically, and more the gentleman than political elements of that body of

learning had themselves evinced. He won; they did not. " Overall, Mack's lifetime of accomplishments before, after, and in addition to his abduction research weighed heavily in post-mortem assessments. It is arguable, but reasonable, to say that he died a scientific authority.

Analyst's perspective: the last word…

In his preface to *Abduction* (1994a), Mack said, "The contemporary Western tenet that we are alone in the universe...is, in fact, a minority perspective, an anomaly" (p. 5). This minority view was defensible in 1994. Ten years later, it is less so. In 1996, scientists announced they had found what they believed to be evidence of past life on Mars. In 2004 robotic exploration of Mars produced historic evidence of liquid water on its surface, indicating an environment conducive to life at some point in the planet's life. During the years in between, scientists produced a steady stream of discoveries about life in the most extreme environments on Earth and environmental conditions on other planetary bodies, and they located more than 100 extrasolar planets (see Deardorff, Haisch, Maccabee, & Puthoff, 2005). Astrophysicists now say the universe is, roughly, about 26 percent dark matter, about which they know very little; 4 percent matter as we know it; and 70 percent dark energy, about which they know virtually nothing (Irion, 2003; Rowan & Coontz, 2003). In the ever-broadening frame of scientific understanding of reality, perhaps Mack's expanded conception of reality is not so far beyond the boundaries of legitimate science as it was when he first proposed it.

Every time I have made a presentation on this research project or talked with a friend or a stranger about it, scholars and others alike have wanted to hear about...what I know about UFOs, abductions, and government conspiracies to hide crashed spacecraft and alien corpses. People have not asked about my data or my methodology. They have asked what I think about alien visitations to Earth. To satisfy those readers who may have such questions on their minds, I offer the following "FAQ" (frequently asked questions).

Q: Do you think abduction is real?

A: I have no clue.

Q: Do you believe in UFOs?

A: I do not believe in UFOs, and I do not disbelieve in them, either. I have never seen a UFO.

Q: Do you think the government has conspired to hide crashed UFOs and the

corpses of their alien passengers?

A: Based on what I have observed about how the U.S. government operates, I do not believe so.

Q: Have you been abducted?

A: No. But ever since I began this project I have yearned for it to happen, off and on…. I have talked with someone — a graduate of Harvard and of Columbia University's School of Journalism — who believes he has been abducted; he did not appear to be crazy.

Q: Do you think John Mack was crazy?

A: My impression is that he was not. But I am not a psychiatrist, and therefore I am not qualified to make such a judgment.

Q: Do you think Mack was heroic?

A: I do not know enough to judge. I do know enough to be able to say that I respect him for knowing and defending his beliefs, and for using his authority to question authority.

Notes

1. Among Web sites visited were: http://atheism.about.com, www.abovetopsecret.com, www.anomalist.com, www.beyondtopsecret.com, www.surfingtheapocalypse.net, www.ufoevidence.com, and www.xenophilia.com. Information cited in this epilogue came from these sites. Some obituaries and "remembrances," including Geller's, were found at www.johnemackinstitute.org.

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*An asterisk * marks texts selected for analysis of media coverage of the Mack case.*

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Appendix A

Human Subjects Research Approval

This project was granted a Notice of Approval, Exempt Review, by the Bloomington Campus Committee for the Protection of Human Subjects, Indiana University (From; Cybil Cole, Research Risk Compliance Officer, Re: Protocol entitled: Elite Media, Elite Scientists: Controversial Research and Boundary Work, Protocol # 99-2846, Approval Date: February 18, 1999). This appendix includes a copy of the informed consent form, interview questions, and exempt research statement as submitted to and approved by the Committee. All subjects interviewed for this project signed informed consent forms before interviews were conducted. Interview subjects are listed in Appendix B.

Indiana University -- Bloomington
Informed Consent Statement

Dissertation Project: Elite Media, Elite Scientists, Controversial Research, and Boundary Work

You are invited to participate in a dissertation research project as an interview subject. The purpose of this project is to explore, through text analysis, interviews, frame analysis, and rhetorical analysis, how elite media cover controversial research conducted by elite scientists. Researchers have studied how the media cover science, but a search of the literature on science journalism has not revealed reports on elite media coverage of controversial research conducted by elite scientists. This study should enhance understanding of this phenomenon.

Information
This study will be a qualitative research project, exploring a topic by asking questions. To address these questions, a case study will be conducted of media coverage of controversial research conducted by an elite scientist: psychiatrist John E. Mack, M.D., a tenured member of the faculty at Harvard Medical School who is engaged in the study of people who claim they have been abducted by aliens. Textual analysis is under way and will continue throughout this year. Frame analysis and rhetorical analysis will be conducted upon completion of interviews. Interviews for this project will be conducted with journalists who wrote texts chosen for analysis and scientists who served as sources in these texts. Questions to be asked in these exploratory interviews are: How and why did you come to write this story or serve as a source for this story? How did you choose your sources for this story or decide to be a source for this story? What role, if any, did other colleagues (reporters, editors, scientists) play in producing this story? These interviews should take about an hour. Interviews will be audiotaped to back up the principal investigator's notes; these tapes will not be used for any other purposes, and they will be stored along with printed source materials once the study is completed.

Risks and Benefits
Journalism and science play significant roles in our society. By participating in this study, you will be helping to advance understanding of working relationships between journalists and scientists. Approximately 12-20 subjects will be interviewed for this project. As interviews will concern published texts, interview subjects will be identified by name and affiliation in the dissertation. No risks are foreseen to participating in this study. If you have any questions at any time about this study or procedures employed in this study, you may contact the principal investigator: Linda Billings, Indiana University School of Journalism, EP 200, Bloomington, IN 47405 (home address: 1377 W. Allen St. #E3, Bloomington, In 47403), phone 812/339-8307, email: libillin@indiana.edu. If you feel that you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the office for the Human Subjects Committee, Bryan Hall 110, Indiana University, Bloomington, IN 47405, 812/855-3067, or by email at iub_hsc@indiana.edu.

Participation
Your participation in this study is voluntary; you may withdraw at any time. If you withdraw from the study before data collection is completed, your data will be destroyed.

Consent
I have read and understand the above information. I have received a copy of this form. I agree to participate in this study.

Subject's signature_____
Date_____

Investigator's signature_____
Date_____

Dissertation Research Project -- Interview Questions

For journalists:
How and why did you come to write this story?

How did you choose your sources for this story?

What role, if any, did other colleagues play in producing this story?

For scientists:
How and why did you come to serve as a source for this story?

How did you decide to be a source for this story?

What role, if any, did other colleagues play in your decision to serve as a source for this story?

L. Billings, ID #XXXXXXXXX ***February 12, 1999***

EXEMPT RESEARCH STATEMENT

A. The purpose of my dissertation research project, "Elite Media, Elite Scientists, Controversial Research, and Boundary Work," is to improve understanding of the relationships among journalism and journalists, science and scientists, and society. In my dissertation, I will explore these relationships, through textual analysis, interviews, frame analysis, and rhetorical analysis, by examining how elite media cover controversial research conducted by elite scientists. I intend to conduct a qualitative research project, exploring my topic by asking questions. In order to address these questions, I will conduct a case study of media coverage of controversial research conducted by an elite scientist: psychiatrist John E. Mack, M.D., a tenured member of the faculty at Harvard Medical School, a Pulitzer Prize winner, and a well known authority in his field of psychiatry who is now engaged in the study of people who claim they have been abducted by aliens. I plan to enter interviews for my case study with questions in mind but without expectations of answers. I intend for these interviews to be exploratory; I will ask my interview subjects to tell me their stories. I will audiotape my interviews to back up my notes. Once I finish my dissertation, I will store these tapes along with other research materials; I do not plan to use them for any other purpose.

B. The subjects with whom I intend to seek interviews are the authors of texts I have chosen to analyze for my dissertation and sources cited in these texts. I hope to interviewing 12-20 subjects for my project, depending on availability. I will not be paying my subjects to participate in these interviews, and I have no previous relationship with any of my intended subjects.

C. I will be doing most of my dissertation research at IU-Bloomington. I wish to conduct a number of face-to-face interviews in Boston and Cambridge, Massachusetts, where a number of subjects are located. *(See Appendix.)* I will likely be interviewing other subjects by telephone, email, or letter because they are in several different geographical locations. I anticipate asking my subjects for an hour of interview time. I can follow up face-to-face interviews by telephone or email if I need to clarify any information. All of my intended interview subjects have authored published stories or served as on-the-record sources in these published stories, so the preservation of confidentiality will not be necessary.

D. I am the sole investigator on this project.

Appendix B

Interviews

The following subjects were interviewed for this study. All subjects signed informed-consent forms before interviews were conducted:

• John E. Mack, Harvard Medical School, March 15, 1999, Cambridge, MA

• Arnold Relman, Emeritus Professor, Harvard Medical School, March 19, 1999, Cambridge, MA

• Joseph Kahn, staff reporter, *Boston Globe,* March 17, 1999, Boston, MA

• Stephanie Schorow, staff reporter, *Boston Herald*, March 18, 1999, Boston, MA

• Sara Tery, freelance writer, Bo*ston Globe Magazine*, March 19, 1999, Boston, MA

• Stephen Rae, freelance writer, *New York Times Magazine*, January 8, 2003, (via email)

• James Gleick, freelance writer, *The New Republic*, April 23+, 2003 (via telephone)

(I produced digested rather than full transcripts of the Mack and Relman interviews, which I audiotaped, for my own use in this analysis. I did not audiotape the interviews with Kahn, Schorow, Tery, Rae and Gleick, as taking notes seemed more comfortable for the subjects than making tapes.)

The following people were contacted repeatedly for interviews but did not respond to requests:

• David Chandler, *Boston Globe*

• Milo Miles, *Boston Globe*

• M. A. J. McKenna, *Boston Herald*

• James Gordon, M.D., Center for Mind-Body Medicine (*New York Times Book Review*)

• Jill Neimark, *Psychology Today*

Vita

Linda Billings

Linda Billings is a research associate with the SETI Institute. She has been conducting science and risk communication studies for NASA's Planetary Protection Office since September 2002.

Ms. Billings is a doctoral candidate in mass communication at Indiana University's School of Journalism. Her primary concentration is science, technology, and culture. Her dissertation research focuses on the role of journalists in maintaining the cultural authority of science. She earned her B.A. in social sciences from the State University of New York at Binghamton (1974) and her M.A. in international transactions from George Mason University (1995).

Ms. Billings has worked for more than 25 years in Washington, D.C., as a journalist, freelance writer, and consultant to the government. As a journalist, she covered energy, environment, labor relations, and aerospace, primarily for the trade press. She was the founding editor of Space Business News (1983-5) and the first senior editor for space at Air & Space/Smithsonian magazine (1985-8). She also was a contributing author for First Contact: The Search for Extraterrestrial Intelligence (New American Library, 1990). Ms. Billings was a member of the staff for the National Commission on Space (1985-86). For the National Science Foundation and the National Aeronautics and Space Administration, she has worked as a policy analyst, communications specialist, education and outreach planner, and writer and editor. Her articles have appeared in Space Policy ("Issues in planetary protection: policy, protocol, and implementation," Volume 20, 2004, coauthored with J. Rummel), the Chicago Tribune ("Space station is good for more than star-gazing," October 8, 1998), Washington Post Magazine ("Realtime: Pre-Life Sciences," August 11, 1996) and Space News ("Aim for Exploration, Not Exploitation," October 14-20, 1996). From September 1999 through August 2002, she was director of communications for SPACEHAB Inc., a builder of space habitats.

Ms. Billings served as president of Women in Aerospace (WIA) for 2003. She has served as an officer of WIA for more than 15 years, and she received an Outstanding Achievement Award from the organization in 1991. She received a Media Award from the Washington Space Business Roundtable in 1988. She is currently a member of the NASA Advisory Council's Advisory Subcommittee on Research and Technology (formerly the Advisory Committee on Biological and Physical Research).